



SATURDAY, MARCH 27, 1875.

Alley's Duplex Spring.

From the London Engineer we copy the accompanying engraving and description of a new spring now used on freight cars of the North British Railway:

"The drawing shows a new compound spring, suitable for an 8-ton goods wagon, and composed of two laminated springs, so arranged as to roll inwards in one another as the load on them increases, thus multiplying their strength by decreasing the distance between their points of bearing, producing a powerful cushion, acting without rigidity against concussion. By their circular formation the steel is placed in the most favorable position for resisting strains, and is, therefore, not liable to fracture, while the free and unrestrained motion of the springs in unison with one another admits of that soft elasticity so desirable in rolling stock. The advantages claimed for these springs are: that a set of patent duplex springs weighs only one-third of the weight of a set of common railway springs, viz., a set of duplex springs weighs only 140 lbs., as against 430 lbs., the weight for a common spring. As the cost of manufacturing the patent spring is not materially in excess of the cost of making the common spring, it will be easily seen that they can be made at one-half of the price paid at present for springs."

The Engineer reports a test of this spring in which a car loaded with 10 tons was made to drop from 2½ to 3 in. on hardwood blocks, when they showed no weakness, and on the North British Railway, after 10 months' service, they gave good satisfaction, and the company had ordered 300 sets. They are supplied by M. & J. Hirsch & Co., Craven street, Strand, London.

Trial of a Locomotive.

The following notes of a trial of locomotive No. 25 on the Hudson River Railroad have been given to us. We would be glad to receive similar memoranda from other sources.

The first trial was made on June 22, 1874. The run was from New York to Poughkeepsie on a passenger train. The train from New York consisted of 1 baggage, 5 Wagner drawing-room cars and 2 coaches; to New York, of 1 baggage, 4 drawing-room cars and 3 coaches. The distance from New York to Poughkeepsie is 75 miles, and the amount of Cumberland coal consumed during the round trip was 4,420 pounds, or 29.46 pounds per mile. The time was 2 hours and 10 minutes each way.

The second trial was made on June 23, 1874, with the same engine. The up train consisted of 1 baggage, 5 drawing-room cars and 3 coaches; the down train of 1 baggage, 5 drawing-room cars and 3 coaches. The run was made over the same part of the line, but in going up the engine made up 17 minutes lost time and 20 minutes coming down. The coal consumed was 6,080 pounds, or 40.2 pounds per mile.

The amount of ashes and cinder in the ash-pan was also weighed, and consisted of 443 pounds during the first day and 594 the second day; so that the amount of "combustible" burned during the two trips was 3,977 and 5,436 pounds, or 26.51 and 36.24 pounds per mile respectively.

The engine with which the experiments were made has Buchanan's fire-box, and was run by Mr. Edward Stamford and fired by William Hare.

Contributions.

The American Society of Civil Engineers and Its Policy.

No. 111 BROADWAY, NEW YORK, March 20, 1875.

TO THE EDITOR OF THE RAILROAD GAZETTE:

An article published in the editorial columns of the Gazette of March 13, entitled "The American Society of Civil Engineers and Rapid Transit," a copy of which seems to have been sent to each member of the Society, calls for a reply from that portion of the members whose views are assailed and whose position is misrepresented in the article.

As one who has taken, and intends to take, an active part in opposing a policy which appears to myself and to every member of the Society with whom I have conversed or corresponded, except some half dozen, to tend directly to the destruction of the Society, I take the liberty of requesting the publication of this statement.

The objects of the "American Society of Civil Engineers" are stated in its constitution to be "the professional improvement of its members, the encouragement of social intercourse among men of practical science, the advancement of engineering in its several branches, and the establishment of a central

point of reference and union for its members." This is the view taken of the Society by its founders, and I believe by a large majority of its present members. Recently, however, it appears that certain members hold the opinion that the object of the Society is, "in the broadest sense, to increase and disseminate information concerning the art and science of the profession to which its members belong," a sentence which has rather a grand sound at first, but the meaning of which is somewhat difficult to discover. It is explained, however, as meaning virtually, that the Society ought to become a public debating club for such members as desire to ventilate projects which no one will pay them to perfect, but which by the aid of the daily press they may cause to be spread before the public as the views of members of an important Society.

The issue now before the Society is sharp and well defined, and it is of no use to declare it otherwise than in plain terms. It is this: Is the Society to be devoted to the professional improvement of its members by the interchange of their experience and views on subjects of practical usefulness, or is it to be given up to theorists who will try to educate the general public into the belief that heretofore all has gone wrong, and that the Society alone can set things right?

It is altogether untrue that any section of the Society is opposed to the appointment of special committees to report on subjects of practical interest to the profession. It is untrue that any effort has been made to suppress papers containing valuable information. It is emphatically true that opposition has been made, and equally true that it will continue to be made, to the appointment of committees to pro-

reputation indulge themselves there, but let them spare us the mortification of being identified with that class.

No objection is likely to be made to the appointment of special committees to report on subjects which will add to the information and increase the efficiency of members, for frequently the desired information can be better obtained and collated by an authorized committee than by individuals.

Of this class of committees is the one which presented the valuable report on rails at the last convention—the committee on the Williamsburg dam, and that on railway signals.

As for the committee on "the best means of averting bridge accidents," none but the initiated can tell what it means. You refer to it as the committee on "strength of bridges." As there are half a dozen rival bridge patentees on the committee, it may safely be presumed that they will not attempt to get the Society to endorse any one patent trust.

The committee on "a comparative examination of the principal pumping engines in use" are called upon to perform a task of great magnitude and importance, and which, if properly carried out, would involve a very heavy expenditure. They may find difficulty in accomplishing it successfully, as it is said that the only member of the committee who is practically acquainted with the subject declines to act with them, because he has too much work which pays him to give the requisite time to the investigation.

Now all of these are practical subjects for investigation, and much benefit to the members can be obtained from their proper treatment. But not one of these committees was directed to "prepare plans" for a special work of construction. That was reserved for a meeting of the Society in September

of last year, when there was a small attendance, when a resolution was put through without consideration and without its scope being perceived by several of the members present, who have since expressed their disapprobation of it, directing a committee to report plans for rapid transit in the city of New York. The attention of members was called to this operation by frequent paragraphs in the daily papers, setting forth that "the Society" was investigating the subject, and would soon present a comprehensive plan. Some members of the committee even went so far as to call on the Mayor, despite the rather sneering terms in which he had alluded to them in a public document as a "self-constituted committee of engineers," and request him to postpone action by the city government until he could see their plan.

It was this deliberate attempt to create a false impression in the public mind, and pass off the individual views of a few members as the opinion of the Society, that aroused the members to a sense of the false uses to which it was attempted to pervert the organization.

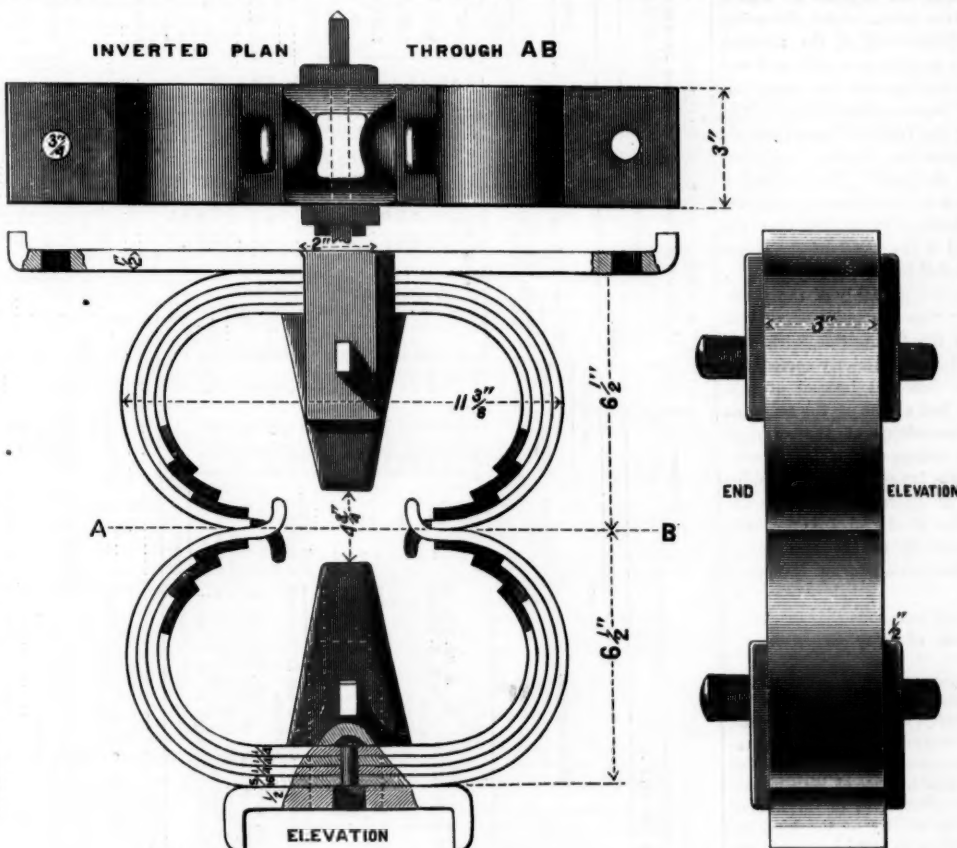
At the meeting, therefore, at which the report of the Committee was presented, and which is believed to have been the largest assemblage of members ever held, except the annual meetings and conventions, a decided expression of opinion was

had, not as to the merits of the paper, nor as to the ability of its authors, but as to the propriety of the course they had pursued in misrepresenting their position. It was no "vague terror" that haunted those who participated in the discussion, but explicit indignation that the gentlemen who had been commissioned, after a fashion, to examine certain facts, had distinctly given "the public" to understand that "the American Society of Civil Engineers" would on that day promulgate a scheme for rapid transit.

The resolution passed at that meeting, and which was incorrectly quoted in the Railroad Gazette, was a kind of compromise. It was intended, however, as you remark, to "admonish" the Committee, and make future committees careful how they attempted to commit the Society as a body to any individual schemes. So distasteful was it to the Committee that they disobeyed the positive order of the Society and printed it, not at the head of the paper, but in as inconspicuous a place as possible on a detached cover. Whether even this much was done in the five hundred copies which were placed on sale is not known. A discussion of the report itself is not called for here. The place for that is in the Society. It is questionable whether any extended or valuable discussion will result even there. Engineers of experience and standing in the profession show no disinclination to discuss matters of principle and points of practice, but I have yet to learn that it is a custom among them to publicly offer gratuitous criticisms on immature projects, which they may afterwards be called upon to examine and pass judgment on in the regular line of their duties, and at the request of those who desire their opinion for practical purposes, and will pay for it.

As a summary, the policy of the Society advocated by us, as distinguished from that which you propose, is:

First: Investigation of all subjects of practical benefit to the profession, and the sharing of all information which will



ALLEY'S DUPLEX SPRING.

pose plans for local enterprises, and to the endeavor to have such plans indorsed by the Society.

The Society comprises more than five hundred members of the profession, residing in all parts of the country. The "professional opinion" of such a Society as a body, on matters involving a few general principles, but a great number of purely local considerations, would be worthless unless each member had an opportunity to form an opinion by personal investigation, and to express that opinion. Even then, four hundred and fifty members might hold one view and fifty experts in the special subject under consideration another and the true view. Which ought to be the opinion of the Society? A majority vote of the limited number of members who can be gotten together at any meeting, approving plans for any special work, would carry with it no weight, but would place both the Society and the projectors of the plans in a false position before the public.

Further: the investigation and preparation of any plan require study, experience and judgment. These are the civil engineer's stock in trade, and should be paid for by the parties in whose behalf they are exercised. An engineer who has the knowledge and experience which qualify him for designing important works can always obtain remuneration for the exercise of those qualities, and cannot afford to expend his time and brains gratuitously in vague designs with the hope that those who are to furnish the means for carrying them out will be attracted by the eminent ability he has displayed on paper, and give him a chance to exercise it for a consideration. We never hear of a McAlpine, a Kirkwood, a Chesbrough or a Latrobe peddling their wares in this way.

There are other societies in New York which afford ample scope to those persons who want to hold public debates on scientific subjects and get themselves reported in the public prints. Let those who are greedy for notoriety rather than

sidings, the total tonnage, the total cost for supplies and labor, total credits, and no long and difficult statements to make up.

I think that it would much conduce to the interests we serve if all Engineers engaged in the maintenance of way in this country would unite in the monthly publication of a similar statement condensed, and to that end I would invite an expression of opinion from all those interested in the matter.

Doubtless the present form could be vastly improved, or it may be that already some one has a better plan to offer.

There might much be said upon this subject, but lack of time on my part prevents me from treating the matter extensively.

C. LATIMER,
Chief Engineer Atlantic & Great Western Railroad.

To the Members of the American Railway Master Mechanics' Association.

TO THE EDITOR OF THE RAILROAD GAZETTE:

I desire to say through your columns to the members of the Master Mechanics' Association that as the time for our eighth annual meeting is approaching, in order to have the reports of committees as full as possible, those who have not done so are earnestly requested to forward their replies to circulars to the chairmen of committees at once, that the reports may be made up and sent to the Secretary's office previous to the meeting of the convention. Master mechanics who are not members of the Association and have been supplied with circulars will confer a favor on the committees by giving them the benefit of their experience. It has been suggested that three or four persons be selected by committees to open the discussion of the subjects presented in order to bring the more important details of the report prominently before the convention, after it has been read. If the committee do not see proper to occupy this position themselves, it would be well for them to select three or four members previous to the annual meeting, and when a report has been read it can be referred to these members, with the understanding that discussion on that report will be in order at a stated hour the succeeding day. Then, if the report is not too lengthy and is a subject of general interest, it will appear, at least in condensed form, in the local press of the day, and the members will then have the advantage of a printed copy to aid in following the discussion. The members who are to lead the discussion will have time to collect their ideas and can, if they see proper, write out their remarks. These would of course be followed by the committee, who, having a thorough knowledge of their report, could not fail to make such a debate very interesting as well as profitable. In order to carry out such a programme there should be duplicate copies of each report that the press may be supplied with a copy and the work of the Secretary's office not impeded. This the Secretary will undertake to have done if the Chairmen of Committees will but furnish their reports by the first of May.

As has been stated in the *Railroad Gazette* the Annual Meeting occurs on May 11 in the city of New York. No special invitations to master mechanics will be sent out, but a general one is given to all railroad men present in the city at that time, to attend the convention. Superintendents of machinery and master mechanics of railroads are entitled to membership and are earnestly solicited to be present and become members. Especially is this invitation extended to the master mechanics of the South. The members of the Association will be glad to meet them and discuss the best way of operating the machinery department of railroads. If there ever was a time when the best possible system of good management and economy combined needed to be devised for the government of the machinery department and every other department of railroads, it is now. The Master Mechanics' and Master Car Builders' associations stand head and shoulders above all other associations in their personal disinterested work of improvement in their business, and should have the support of all railroad managers in their efforts to secure the highest standard of efficiency and economy in rolling stock.

By reference to page 310 of our Seventh Annual Report it will be found that a committee of arrangements has been appointed, and if it should be desirable to have a ———, what is it?—during the convention, a conference should be had with this committee. This committee has not as yet issued their circular announcing the arrangements, but it is expected they will do so soon.

J. H. SETCHEL, Secretary.

The Committee on Locomotive Tests have issued the following circular, to which the attention of members is called:

To the Members of the American Railway Master Mechanics' Association:

As the Committee on Locomotive Tests, appointed by your Association, have thus far not received any reports of such tests, they desire to call attention to the last paragraph in the circular referring to this subject which the Committee have issued and which reads as follows:

"The Committee of course do not expect to procure all the data enumerated from any ordinary experiments, and therefore they request members of the Association to send records of any experiments which they may have made recently, even though the data recorded may be of only one or more of the phenomena described."

As the object of appointing the Committee was simply to collect together the records of experiments or tests which members have from time to time made, the Committee request them to forward reports of any such experiments made within the past few years, even though no other record of the performance of the engines was kept than the amount of coal consumed and the number of cars hauled.

There are a great many reports of this kind in existence, which, if collected together and made accessible, would be very valuable. The Committee therefore desire to urge members having such records to forward copies to the Chairman as early as possible.

Respectfully,

M. N. FORNEY,
R. H. THURSTON,
W. WOODCOCK,
Committee.

Communications should be addressed to M. N. Forney, Chairman of Committee on Locomotive Tests, No. 73 Broadway, New York.

Master Car-Builders' Association—Circulars of Inquiry.

The following circulars have been issued by the proper committees:

UPON CAR-WHEELS; BEST METHOD OF FITTING; FLANGE WEAR AND CAUSES; MILEAGE AND BREAKAGE.

To Master Car-Builders and Members of the Master-Car Builders' Association:

GENTLEMEN—Please find enclosed the several interrogatories made by your "Committee on Car Wheels; Best Method of Fitting; Flange Wear and Causes; Mileage, Breakage, etc., etc."

The object of issuing this circular is to collect such items of information on the subject that the report will be of interest to the convention that meets in New York, June 9, 1875. We trust your interest in this subject will induce you to aid your Committee by an early answer to the questions proposed, and also by adding such items as your experience and observation have enabled you to collect. Please give as extended answers to the questions as you think necessary, not confining yourself to the space below each question, but use separate sheets if necessary, and modify or add to the questions, so that they will meet your views of the subject.

The questions are not designed for a categorical answer, but are designed so that master car-builders and others interested may find opportunity to exercise their well-known ability in assisting your Committee with information that will enable them to make a valuable and interesting report.

1st.—What is the number, diameter and weight of the narrow-tread cast-iron wheels used with the passenger and freight equipment, respectively, on your road?

2d.—What is the number, diameter and weight of the broad-tread or compromise wheels used with the passenger and freight equipment, respectively, on your road?

3d.—What is the maximum, what the minimum and what the average life or length of time that wheels wear on the passenger equipment on your road?

4th.—What is the maximum, what the minimum and what the average life or length of time that wheels wear on the freight equipment on your road?

5th.—Are the cast wheels in use on your road single or double plate?

6th.—What is the diameter of hole for axle, and length of hub at the wheel seat?

7th.—Do you bore a straight or tapering hole? If tapering, how much in the length of the hub?

8th.—Do you turn your axle straight or tapering at the wheel seat? If tapering, how much in the length of the hub?

9th.—In fitting your wheels, do you rim the hole to make it straight and round? or do you drive the wheels as they come from the machine, bored with the ordinary tool and boring bar?

10th.—What is the maximum and what the minimum pressure (in pounds) required to drive the wheels to a seat on the axle?

11th.—What is the width at which you gauge your narrow-tread and broad-tread wheels, respectively, measuring from points indicated in the standard-gauge form as published in minutes of the Master Car-Builders' Association of 1868?

12th.—If your answers to the above questions do not comprehend your ideas of the best method of fitting car wheels, please give them in full?

13th.—Do you have any loose wheels or wheels that move on the axle when in use? If so, what per cent. of the number in use?

14th.—Do you have occasion to condemn wheels on account of sharp or worn flanges? If so, what per cent. of the number used?

15th.—Do you find the flange wear of the wheels in your six (6) wheel trucks the same proportion that you do in your four (4) wheel trucks? If not, please give the proportion of each?

16th.—Do you meet with more sharp or worn flanges on wheels with the compromise gauge than on the ordinary narrow-tread wheels in proportion to the number in use? If so, please give the per cent. of each respectively?

17th.—Do you use a roller on the ordinary friction side-bearing? How far is it placed from the centre of the truck, and what amount of the weight rests on the side-bearings when the car is loaded?

18th.—Do you find the wheels that have sharp flanges the same size of the wheels on the opposite end of the axle?

19th.—Please give your theory of the cause or causes of the unequal flange wear of wheels?

20th.—Do any of your wheels split or break, commencing at the hub at the time of driving them on the axle or soon after being put in service? If so, what per cent. of the number used?

21st.—Do you have occasion to condemn wheels on your passenger equipment on account of broken plates, treads or flanges? If so, what per cent. of the number used?

22d.—Do you have occasion to condemn wheels on your freight equipment on account of broken plates, treads or flanges? If so, what per cent. of the number used?

23d.—Do the broad-tread or compromise wheels break at the outside of the tread more frequently than the narrow-tread wheels?

24th.—Do you meet with more broken wheels during the winter or frosty weather than during the summer months? If so, in what proportion?

25th.—To what depth are the wheels that you are using chilled?

26th.—Are your wheels chilled entirely across the tread and flange? If not, what part is green sand casting?

27th.—Do you have occasion to condemn wheels on account of bad spots or imperfections in the tread that do not show until the wheel is in service? If so, what per cent. of the number used?

28th.—Do you meet with wheels that are not chilled to a uniform depth the entire circumference of the wheel?

29th.—Do you have occasion to condemn wheels on account of being flattened from sliding where the brakes were applied? If so, what per cent. of the number used?

30th.—What is the maximum, what the minimum, and what the average mileage made during their entire service by the wheels on the passenger equipment on your road?

31st.—What is the maximum, what the minimum, and what the average mileage made during their entire service by the wheels on the freight equipment on your road?

32d.—Do you ascertain the mileage given above by estimate or from a regular mileage account kept for that purpose?

33d.—Have you used any of the varieties of steel or steel-tired wheels? If so, please give any information regarding them that you think will be of interest to the Association.

Please direct your answers to C. A. SMITH, Secretary of the M. C. B. A., No. 113 Liberty street, New York.

H. O. WADLEY, Chairman,
Late of Illinois Central Railroad, Chicago, Ill.

JOHN KIRBY,
Lake Shore & Michigan Southern Railway, Cleveland, O.

D. HOTT,
New York Central & Hudson River Railroad,
West Albany, N. Y.

HEATING, LIGHTING AND VENTILATING PASSENGER CARS.

To Master Car Builders and others having charge of Railway Passenger Cars:

GENTLEMEN—The undersigned were appointed a Committee by the Master Car Builders' Association at its sixth annual convention at St. Louis, and continued at its seventh annual convention held in Boston, and again at its eighth annual convention at Cincinnati.

The following questions were submitted last year, but as very few of the members of the Association favored the Committee with any reply whatever, they are repeated for the purpose of drawing out a more general expression of opinion. It is hoped that through a candid agitation of these subjects, progress will be made and satisfactory conclusions will be reached. Any new facts or experiments showing definite results will be particularly acceptable; also, drawings will be gladly received.

1st.—What kind of heating apparatus do you recommend for heating passenger cars? Why do you recommend it?

2d.—What kind of fuel do you recommend? Why do you recommend it?

3d.—Do you recommend that the heating apparatus be put underneath the car or inside of it? Why do you recommend that position?

4th.—Do you recommend a system of heating and ventilation combined? Why do you or do you not recommend it?

5th.—How many cubic feet of fresh air do you think should be supplied to each passenger per minute in order to keep the air in a car healthful?

6th.—In your opinion, what is the best way to admit this quantity of air into a car?

7th.—By what method would you remove the impure air from cars in Winter, when only common stoves or heaters are used?

8th.—By what method in Summer?

9th.—Do you know of any means by which cars can be heated and ventilated in Winter, and cooled and ventilated in Summer?

10.—What do you recommend for lighting cars? Why do you recommend it?

11th.—In your opinion, what is the best way to protect cars from damage by fire in case of accident to train?

12th.—How are the cars on your road heated?

13th.—How are the cars on your road ventilated?

14th.—How are the cars on your road lighted?

Any other information bearing upon the subject, not suggested by the above questions, will be cheerfully received by the Committee. Address replies to the Chairman, numbered according to questions.

To Non-Members.

SIR.—The Master Car Builders' Association is a national and international organization composed chiefly of those having charge of the designing and building of railway passenger cars and meeting in convention yearly in the month of June.

At its sixth annual convention held in St. Louis, the undersigned were appointed a committee, and were continued at its seventh annual convention in Boston, and again at its eighth annual convention at Cincinnati, to investigate the subject of Heating, Ventilating and Lighting Railway Passenger Cars.

Since these subjects, which lie beyond the scope of most railroad men, are supposed to involve questions affecting the general public quite as much as the railway companies, the Committee desire information concerning them to lay before the next annual convention. Will you favor the Committee with a statement or reply to the following questions, or any of them?

1st.—Are zymotic or contagious diseases propagated to any considerable extent in railroad cars by reason of defective ventilation?

2d.—How many cubic feet of air should be supplied per minute to a carful of sixty passengers, in order to keep the air healthful?

3d.—Considering the dust and cinders, and the danger from draughts of cold air, how many cubic feet of air per minute do you consider it practicable to supply to a car?

4th.—In your opinion, what is the best way to admit this quantity of air into a car? If by openings to the outside air, how large should these openings be, and where should they be placed?

5th.—Do you approve of any mechanical means for forcing the air into the car, either before or after the air is warmed, and if so, what kind would you recommend?

6th.—Should the air be taken in at any particular part of the car, and if so, where and from what part should the air be delivered?

7th.—What arrangement would you recommend for heating this amount of air in winter?

Any other information bearing upon these subjects, not suggested by the above, will be gladly received by the Committee. Please address replies to the Chairman.

W. E. CHAMBERLAIN,

Chairman, B. & A. R. R., Alston, Mass.

V. D. PERRY, H. P. & F. R. R.

A. GLEASON, O. C. R. R.

THE SCRAP HEAP.

Railroad Manufactures.

The Albany & Rennselaer Iron & Steel Works have taken a contract for a considerable lot of steel rails for the Boston, Clinton & Fitchburg road.

The Barney & Smith Manufacturing Company, at Dayton, O., is building some parlor day coaches for the Vandavia Line. They are to be very handsomely finished, but a lighter car than the Pullman day coaches.

The Wyoming Manufacturing Company, Wilkesbarre, Pa., recently built a 20-ton switching locomotive for the Lehigh Valley Iron Company.

The Banlet Manufacturing Company, at Laconia, N. H., has a contract for cars for the Fitchburg road.

N. & A. Middleton, of Philadelphia, have recently received an order for 3,000 sets of coal-car springs for the Central Railroad, of New Jersey.

Riehle Brothers, of Philadelphia, have recently repaired a 100-ton track scale for the Pennsylvania Railroad Company at Columbia, Pa., which was put in by the predecessors of the present firm 25 years ago. It is stated to have been the first successful long-track scale in America. The same firm recently completed a testing machine of 150,000 pounds capacity for the Cambria Iron Works at Johnstown, Pa.

The Pittsburgh American Manufacturer says: "The firms of Carnegie, Kloman & Co., of the Union Iron Mills, and Kloman, Carnegie & Brothers, of the Lacy Furnace, have been dissolved, Mr. Kloman retiring. The business of the mill will hereafter be continued under the firm name of Carnegie Brothers & Co., and that of the furnace by the Lacy Furnace Company."

The Watson Manufacturing Company, at Paterson, N. J., have the contract to replace the bridge over the Delaware near Port Jervis on the Erie road, recently destroyed by flood.

The Dickson Manufacturing Company.

This company has resolved to rebuild immediately the Cliff shops at Scranton, Pa., recently destroyed by fire. Work has already been begun and a part of the shops are to be ready for use by July 1. Meantime the Dickson shops owned by the company, and which have been running eight hours daily have been put on full time and the number of men increased.

Grant Locomotive Works.

The Receiver, Mr. Charles H. Pierson, gives notice that in pursuance of the order of the Chancellor all creditors are required to present their claims against the company to him within six months from March 9; failing to do so, they will be barred from receiving any dividends which may be made to creditors.



Published Every Saturday.

CONDUCTED BY

S. WRIGHT DUNNING AND M. N. FORNEY.

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Editorial Announcements.

Addresses.—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

Contributions.—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subjects pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

Advertisements.—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns our own opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

COMPETING FOR TRAFFIC AT UNPROFITABLE RATES.

When, as now, great railroad companies are seen bidding for traffic at rates which, as their own published accounts show, are considerably less than the cost of carrying, the way to victory in such a competition at first thought seems very plain: Let the attacking party do all the business, and it will incur all the losses. This is a delightfully simple and easy way; it requires only that the competing company should maintain its rates, should refuse to compete—should simply do nothing. The old rate for a passenger from Baltimore to Chicago was nineteen dollars, and the cost of carrying was (and is) probably as much as fifteen; when then the Baltimore & Ohio reduces the rate to ten dollars, the natural inference is that the more passengers it gets the more money will it lose; while its rival, by maintaining its rates, may indeed lose all its through traffic, but will so avoid the loss on that traffic which is inevitable if it meets the other company's rates. If this were as true as at first sight it seems, the true policy of the Pennsylvania would be to direct all its agents to canvass as eagerly for the Baltimore & Ohio as ever they have for their own road, and to force, if possible, all the through travel on their rival's line, which would be exhausted the sooner the more business it should get.

Such a policy, however, would be based on a misapprehension of certain essential facts in the economy of railroad business. It is based on two false assumptions: first, that an enormous increase in the traffic will be attended with a corresponding increase in the cost of carrying it; and, second, that a great decrease or a total cessation of a certain branch of traffic will be attended with a corresponding decrease in the cost of carrying it.

This first assumption is, after all, though false in principle, probably not very seriously misleading in the case of temporary competitive struggles. A certain increase in passenger traffic only serves to fill the trains better, but a larger increase makes it necessary to provide an additional equipment for a traffic which will probably soon come to an end. The second assumption, however, is grossly erroneous and misleading. It is extremely difficult to reduce expenses with a reduction of traffic, and especially when that reduction of traffic is, or is expected to be, only temporary. The Northern Central and Baltimore & Potomac companies cannot at a moment's notice take off half-a-dozen trains, dismiss the train-men and other employees who are made necessary by such trains, and sell the cars and engines, and if they could it would be unwise to do so in March when the company expects to need them

again in May. And even if it could be done, the reduction in expenses would not be nearly so great in proportion as the reduction of traffic. It would probably take a year to make all the reductions in expenses which such a decrease in traffic would make possible, and these would be comparatively small.

Thus, when a rival begins a war of competition by unprofitable rates, the question with the competitor is not whether it will lose money if it competes at these rates, but whether the receipts at these rates even will not be greater than any possible saving in expenses by giving up the competitive traffic for the time entirely. But its true policy is very clearly not to cultivate traffic at the unprofitable rates to such an extent as to require any addition to the expense of carrying it. It is better that the cars that must run be full rather than half empty, at almost any price; but it is not well to have the traffic at unprofitable rates increase so as to make additional trains necessary; and we should say, generally, that when the competing rates are largely below cost each party to the contest should endeavor to turn upon its rival's line whatever increase of traffic is caused by the extraordinary cheapness.

The strongest illustration of the circumstances affecting competitive traffic is found in the actual shipments westward on the trunk lines. Here is a traffic for the most part consisting of valuable goods which can afford to pay high rates, and the movement of which would hardly be lessened at all if the highest rates charged within four years past, uniformly enforced, were charged the year round. Even at those rates this traffic doubtless would not pay the cost of hauling the freight trains westward. But when the Grand Trunk on the north or the Baltimore & Ohio on the south makes an unprofitable rate, the other companies do not hesitate to follow it; for they know that their expenses would hardly be decreased at all if they had no west-bound traffic to carry. The loads eastward are about three times as great as those westward, and the cars must go back, whether loaded or empty. It is an advantage, therefore, for a company to get loads for these cars at almost any rates, and it is better to take this freight at a rate which covers a quarter of the cost of hauling the trains westward rather than let a rival take it. The rate might just as well be higher, if the competing companies could agree, and strictly speaking it ought to be higher, in order to do justice to all other traffic; but the loss of the earnings at the lowest rate ever charged in the wildest competition is not balanced by any corresponding decrease of expenses—scarcely by any decrease of expenses. Thus in the present competition, the companies have been compelled to make their greatest reductions on west-bound rates, which previously were too low rather than too high. In the other direction any increase in traffic is accompanied by an increase in expenses—an increase, perhaps, even greater in proportion than the increase of traffic, for the additional daily train carrying provisions, grain or stock from the West to the East adds not a ton to the traffic westward, which before could be accommodated three times over in the cars going west for loads. The train-load hauled one thousand miles thus necessitates a train mileage of two thousand miles. If the previous proportion of traffic was 100 east to 25 west, 1,250 miles of full train load were hauled for 2,000 miles of train mileage; the additional train hauls one-fifth less with the same mileage, and so, as we have said, the addition to the traffic may necessitate an addition to the expenses proportionally greater.

Thus, what seemed to be the simple problem of a competitive contest is found really to be a complicated one. It seemed that when one party had thrown down the gauntlet, his rival might simply refuse to pick it up. But usually he cannot. He must fight, and his tactical skill will be shown usually in a careful gradation of his competition, seeking always to fill fully the trains he must run, but to avoid a further increase of unprofitable traffic, and to send the excess to his rival. Loss is usually inevitable, and the object is to make our own as little and our rival's as great as possible.

This impossibility of reducing suddenly the facilities for traffic and the expenses attending them usually gives a company with a light traffic a great advantage over a rival with a heavy traffic. Suppose one road from Baltimore to Chicago to have three-fourths, the other but one-fourth of the traffic. Then a reduction below paying rates, the same by both lines, will cause three times as great a loss on the road with the heavy traffic as on its rival. The latter loses five dollars apiece on a hundred passengers while the former loses five dollars apiece on three hundred, and thus quite possibly the weak company may endure the contest much longer than the strong one, which for this particular contest is not strong but weak. Indeed, most competitive contests in this country are begun by companies which, whether strong or weak on the whole, command but a small part of the traffic competed for. They go into the contest readily because they cannot lose much by it, or think they cannot, and feel sure that their rival will lose many times as much as themselves.

This is one of the evils incident to free competition, from which no way of escape seems possible so long as competition is perfectly free.

Nevertheless, we believe that the companies with the lightest traffic would oftener find themselves worsted in such conflicts if their competitors did not so often exhibit an insane fear that the rival's business might increase. That is just what they should desire, with regard to all unprofitable business that requires additions to trains. This is by no means all of the business competed for, as we have shown above, and in the present contest it is doubtless a telling blow upon a rival to take west-bound traffic from it at any price. But too often the agents of companies which are fighting each other with rates lower than the cost of transportation seem to regard every shipment gained by their rival, in whatever direction, at whatever rate, as a victory of the enemy, when it may be by just such victories that he is finally exhausted and compelled to surrender.

STRIKES.

One of the sayings of a distinguished man, whose good name has for some time been enveloped in a mist, is reported to be that "civilization is a good thing, but it carries hell on its borders," the latter referring to the condition of society on the geographical frontiers of civilization. The same thing might be truly asserted of the growth of civilization in older communities. New inventions and discoveries when put into practice almost invariably lay waste some field of human industry, destroy some old and beneficent relations of society, or disestablish institutions to which the interests and affections of people have clung for generations. The compensation for these evils consists of course in the new potency which the invention or discovery gives to mankind to supply its wants and gratify the cravings of humanity. We will not discuss here whether mankind are made better or worse, whether happiness is increased or diminished, by the gratification of all the wants which civilization supplies. All that we want to point out now is, the very great complexity which the discoveries of modern times have produced in the organization of society. Our relations to each other, to government, to corporations; those of the power which governs to the subjects who are governed and of capital to labor daily become more intricate and difficult to comprehend.

This was very forcibly illustrated by the folly of some of the granger legislature enacted during the past few years. Our theory of government is based on the assumption that all commercial affairs will be regulated by the laws or competition in trade and of supply and demand. On this sub-stratum we have erected an elaborate political structure under which rights and privileges have been granted to combinations of private persons which have steadily increased in power until they have acquired "the practical control over certain of the functions essential to modern life." These combinations have become so powerful that most citizens are helpless if they undertake to resist them, and the laws of competition and supply and demand have by no means the same degree, and in some important respects not at all the same kind, of influence as in ordinary business conducted by individuals; and their effect tends to decrease with the perfection of the business, with the most economical conduct of which, indeed, their free action seems incompatible.

It has been said that Americans never begin any important work without first electing a president, secretary and treasurer, and perhaps one of the greatest safeguards to our institutions is the fact, that many of our citizens regard the action of such an organization as being more or less authoritative. Whether it be owing to that fact, or to our habit of submitting all political disputes to the decision of a majority, it is true that there exists a blind confidence among us in the reformatory power of legislative statutes. The will of a majority is apt to be regarded as the authority which makes any measure effective, when it is really only an effort—often utterly vain—to produce an effect, and proves only a general desire to effect something. Our statute books are full of legislative enactments intended to resist the effect of natural laws which are no more amenable to such influence than the law of gravitation would be. There are evils in the community and which attend civilization which are as ineradicable by legislation as is fever and ague. There are political and social evils the cure for which is no more known than for some physical diseases. All that we can do therefore is to alleviate them and study their symptoms and trust that time, experience and new discoveries will show us a cure.

Among evils of this kind which have been the result or rather have attended modern civilization is the relation of capital to labor. The increase of power which well organized combinations gives to great corporations, which usually represent aggregations of capital, renders individuals every year relatively less powerful. They simply become units in a great machine which grinds away remorselessly, indifferent often whether its grist is made up of human hopes and health and life. It is a fact, notwithstanding all the splendid results which

have been achieved by modern organization, that it is dividing the population more and more into two classes, one of which is absorbing the wealth, and the other is being reduced to what the English call a wage-receiving class. That the helplessness of the members of the latter class to resist the injustice of the former should lead them to combine and thus resist the power of organized capital by organizing labor is not surprising, and is as much the result of cause and effect as any other physical or social phenomenon. It is, therefore, utterly futile to ignore the fact of such combination or to attempt to "crush it out." The combination of the laboring or wage-receiving classes to resist the power of organized and combined capital is one of the results of modern civilization and can no more be "crushed out" than the sale of wine and spirits. They are both the result of a demand produced by the conditions or environment of our natures, or of the existing state of society if you choose. Either human nature must be changed or the conditions of modern society must be altered. That the latter will ultimately be the result of the present and future agitation of this subject many who have studied the question deeply think there is little room to doubt, but it is best now frankly to admit, that of the means and manner of affecting this change, if it is to come, we are still ignorant, and even if we were not, probably they would lie entirely beyond our control. Meanwhile, the combinations of labor against capital and capital against labor must be treated like any other incurable disease, and we must look to alleviation and not eradication as furnishing the only hope of relief.

It may be remembered by some of our readers that in discussing this subject heretofore we have recommended the adoption of some form of arbitration for the adjustment of the dispute between those who receive and those who pay wages. This method has been adopted in England, where strikes have for many years been more frequent and more formidable than in this country, with very great success. It has, it is true, not been efficacious in preventing strikes in all cases, but it has often led to a better mutual understanding between the men and their employers, so that misunderstandings have been explained, and mutual conciliations have led to the adjustment of difficulties which ultimately would have led to either strikes or lock-outs.

The ordinary development of a strike begins by some cause of dissatisfaction among the men. This is talked over, complained of, and usually somewhat exaggerated, and finally results in the adoption of some sort of resolution by their association expressing their cause of complaint. Such resolutions are usually adopted at meetings which are attended by one party to the dispute alone, that is, the employed, who are usually wrought up by a sense of wrong into a state of greater or less indignation. The consequence is that the resolutions adopted very often express the cause of their grievance very inaccurately and intemperately. These resolutions are then sent, when the dispute occurs on a railroad, to the master mechanic, superintendent, president or other officer of the road. In such cases, if the person who receives the resolution is, as sometimes happens, an arbitrary, domineering and self-conceited person, he immediately becomes exasperated, and in his answer to the petition or resolution is apt to use language more forcible than conciliatory. This in turn gives fresh cause for dissatisfaction, so that the next step is open insubordination, which, of course, must be resisted by those in authority. After the outbreak of the strike, there are always a certain number of turbulent or desperate persons who either belong to or sympathize with the strikers, and who commit open acts of violence. There are then no arguments which can be used excepting those which are placed in the hands of policemen or are carried in cartridge-boxes. In this way each party becomes involved in a network of crimination and recrimination from which there is no disentanglement possible which is not very disastrous to the interests of each. If all men were very wise, prudent, just and good, then probably strikes would never occur. They are due to the fact that such is not the case, and in dealing with the latter, the conditions under which they occur should be carefully kept in mind and fully apprehended. The complaint which is nearly always made by the employers is, that the men are unreasonable, seditious and insolent, and given to exaggeration, inaccuracy and injustice. Now before resenting such charges it should be remembered that the very fact that persons are placed in authority implies that they are more reasonable, obedient to superior authority, respectful, accurate and just in their dealings and habits of thought than those over whom they exercise authority. Their treatment of the latter should therefore be that of a wiser and more prudent person to those who are neither so wise nor so prudent. The fact should always be kept in mind, that the position occupied by a railroad official is one of superiority—not only in authority, but superiority in wisdom, forbearance and far-sightedness; and such a person who will allow his own feelings of indignation and resentment to influence his action is obviously unfit to control interests as important as those of a great railroad.

On the other hand, those who receive wages should remember that there are circumstances surrounding all railroads of which they are quite ignorant. The error is almost universal among railroad employees of regarding the treasury of a railroad company as an inexhaustible depository, from which unlimited amounts of money can be drawn without exhausting the supply. That it "is not thus, but far otherwise," many railroad managers and stockholders—and alas! creditors—have learned to their great sorrow. Now, it very often happens that a strike is the direct result of some misunderstanding, which a little mutual explanation would correct, but which without such explanation soon becomes supplemented with hard thoughts and hard words, until the feelings of both parties are wrought up to such a degree that no just and fair discussion is possible thereafter. In such cases, if the principle of arbitration were adopted, and each party were allowed to present its statements of facts and arguments to dispassionate and disinterested parties, there is great reason to believe that the difficulties would often be adjusted satisfactorily to all parties, without resort to the costly, irritating, and to some extent destructive decision of a strike.

In such cases it very rarely happens that the parties interested realize, to quote from a writer whose words we often find to express what we want to say much better than our own, "how difficult it is to make men understand anything thoroughly—for instance, how needful it is to repeat arguments, to bring them home to the hearer by various illustrations, and to retrace and restate the course of any argument from the beginning." Usually when discontent arises, which is premonitory of a strike, the only direct medium of communication which exists between the employers and employed is a committee appointed by the latter. A comparatively brief interview is then held with the employers, in which the representatives of the employed are frequently received with a sort of arbitrary imperiousness which is the very reverse of conciliatory. To quote again from Sir Arthur Helps: "Another error which, in our juvenile days, did much prevail with us, was the belief that other men, especially large bodies of men," would act in conformity with the dictates of right reason; whereas those disturbing elements—feeling, prejudice, fancy—play an immense part in human affairs." Now, it very often occurs that in cases of discontent the workmen—especially the members of their representative committee—are influenced more by being received respectfully and with that sort of consideration which every honest man owes to another than they are by the question in dispute. In nearly all cases a refusal to grant their requests is not nearly so preventive of a reconciliation as the high-and-mighty airs which are sometimes assumed by those who are "clothed with a little brief authority."

To show that the course we recommend is a practicable one, the experience of a leading road which enters New York may be quoted. All through last summer and autumn there were mutterings of discontent and premonitions of a strike on that line. It was finally determined by the management that some changes which were contemplated, and which it was thought might precipitate a strike, would be made, even though by enforcing them such a contingency would be encountered. It was proposed, as is customary, to post a notice on the bulletin-board announcing that after a certain date the new regulation, which concerned the locomotive runners alone, would be enforced. Before doing so the matter was discussed by the President, Superintendent and Master Mechanic, and it was proposed, we believe by the latter, that instead of posting up the new regulation, and before doing so, notice should be sent to the local division of the Brotherhood of Locomotive Engineers, requesting them to send a committee to confer with the officers named above. The wisdom of such a course commended it, and it was accordingly adopted. After notifying the proper officers of the Brotherhood of the decision, a committee was sent to meet the officers of the railroad, and after a full conference, during which the nature of the proposed change and the reasons for it were fully explained, the committee were requested to confer with their own organization. This was done, and the proposed change was agreed to without further remonstrance. Had the ordinary plan been pursued, in all probability a disastrous strike would have followed which would in any event have resulted in great loss to both parties.

In discussing this subject we do not wish to shut our eyes to the fact that some of those who participate in strikes are often guilty of almost inconceivable acts of folly, that their conduct is often brutal and criminal, and that there is in nearly all trades-unions, as in most other associations, a certain element of blatant ignorance or stolid wooden-headed stupidity and prejudice against which no reasoning or persuasion, however just and fair or disinterested, can have any influence. There are doctrines, too, inculcated by those who assume and misrepresent the name of "labor reformers," which, if carried to their ultimate results, would instigate active hostility to all civilization. But

* The italics are ours.

the fact that there are persons who hold such doctrines is not sufficient to induce those who must treat with combinations of working men to do so as though the latter were all outlaws or criminals.

As we have said before, such combinations are facts of the Nineteenth Century which it is folly to ignore, and it is because we believe that the plan of dealing with them which we have indicated is much the most fair, just and wise, and more worthy of rational human beings than resistance to what is irresistible, that we have written as we have.

Errata.

In Mr. Charles Bender's letter on "Lattice Bridges in America," which was published in our number of February 27, the following errors occurred in printing: Mr. Calcott Reilly is there said to agree with Mr. Bender in "the reprobation of the use of riveting," when *abuse* of riveting was written. In the drawing "8,000 lbs." is printed instead of 80,000 lbs. In the second column, fourth line above the cut, speaking of the horizontal and vertical plates, the article reads, "and these two bodies in the very important bottom chords are connected by not more than $\frac{1}{4}$ in. effective area." Here for $\frac{1}{4}$ in. read $\frac{5}{8}$ in.

Mr. Bender has recently returned from Europe and calls attention to these serious errors as early as possible.

RUSSIAN RAILROAD ACCIDENTS in 1874 caused the following injuries to persons:

	Killed.	Severely injured.	Slightly injured.	Total.
To employees.....	184	338	61	468
To passengers.....	0	10	5	24
To others.....	104	46	6	156
Total.....	297	379	73	648

Besides these no less than 14 persons died a natural death while travelling in the cars, and five committed suicide on the track. There were 261 derailments of passenger trains which caused considerable delays, and 81 collisions. The average length of railroad open was about 10,735 miles, and about 25,000,000 passengers were carried on them. The speed is light, scarcely ever more than 25 miles an hour for express and usually less than 18 miles an hour for freight trains, the number of trains on most roads is very small, on many roads only one passenger and one mixed train each way daily, and on some not so many—and the roads are perhaps the straightest and most nearly level in the world: until the opening of the new road to Sebastopol January 17 last, there was not a railroad tunnel in the Empire. One of the causes which limits the number of accidents to employees greatly is the fact that there is but a trifling local traffic and there is rarely occasion to couple or uncouple cars of passenger trains on the way. It is said that many roads have their passenger trains made up without change the whole year round. The record is of those accidents whose effects became known, and is incomplete, as the statement of persons slightly injured sufficiently indicates.

THE GERMAN RAILROAD UNION, the organization of German-Austrian and connecting railroad companies of which we have now and then made mention, at the beginning of the present year included 99 railroad companies with 28,457 English miles of railroad—most of the railroad east of France and west of Russia. There was an increase of 1,604 miles in the Union during the year. The management with the greatest length of road is that of the Bavarian State Railroads, which has 1,517 miles; the Austrian State Railroad Company (which is a private company) had 1,451 miles, and the Austrian Southern 1,438 miles, but no other so much as a thousand miles. Of the whole mileage in the Union there were:

State railroads.....	1,567 miles.
Private railroads worked by the State.....	5,641 "
Road under corporation management.....	30,239 "

Of the ninety-nine managements thirty-two have roads less than a hundred miles long, but the average is nearly 300 miles (285 miles).

THE PRUSSIAN RAILROADS, according to the just issued Government statistical report for 1873, had during that year an average of 8,420 miles of road in operation, the gross earnings of which were \$118,836,075 gold, or \$14,114 per mile, equivalent to \$16,130 in our currency, and something more than twice as great as the average earnings of the railroads of the United States for the same year. The working expenses were 55.85 per cent. of the receipts, or \$8,844 currency per mile. The capital invested in these roads amounted to \$792,994,560 gold, or \$94,168 per mile, equal to \$107,620 currency. The net receipts (\$7,286 currency per mile) were 6.76 per cent. on this capital, against 7.54 per cent. in 1872. Out of these net earnings, however, the payments for reserve and renewal funds and the railroad taxes had to be paid, and the result was considered so unsatisfactory that a special law was made authorizing the companies to raise their freight tariffs 20 per cent.

THE SPEED OF TRAINS IN GERMANY is illustrated by a report of the Railroad Bureau of the Empire for the month of December last. It states that the greatest speed per hour, including stops at intermediate stations, was: for express and fast trains, 34 miles, on the Berlin, Potsdam & Magdeburg road; for ordinary passenger trains, 25 miles per hour, on the Maerchen & Posen road. The slowest speeds were: for express and fast trains, 21 miles an hour, on the East Prussia Southern road; for ordinary passenger trains, 16 miles per hour, on the Erms-thal and the Cronberg roads, of Wurtemberg. The average speeds per hour were: for express and fast trains, 28 miles; for ordinary passenger trains, 21 miles. This is for the whole empire except Bavaria.

"POOLING EARNINGS" seems to be not peculiarly an American or even an Anglo-Saxon practice. A recent Vienna letter

to the Journal of the German Railroad Union says that a compact has been completed between five German, Austrian and Hungarian railroads which compose the routes from Hungary to Breslau, to Stettin, to Hamburg, to Berlin and to Dresden. The companies named are to receive certain proportions of the receipts of the traffic over these routes "so that the roads are no longer to contend against each other for competitive traffic, as has been the case until now."

General Railroad News.

ELECTIONS AND APPOINTMENTS.

United States Commission on Boiler Explosions.—Prof. Winlock of Harvard University and Prof. B. H. Thurston of the Stevens Institute, Hoboken, N. J., have been appointed members in place of Supervising Inspector Smith, resigned, and Prof. Crawford, deceased. The other members of the Commission are Isaac V. Holmes, Charles W. Copeland and J. R. Robinson.

Davenport & St. Paul.—The United States District Court has appointed John E. Henry, of Davenport, Ia., Receiver, in place of George H. French, who asked to be relieved.

Cairo & St. Louis.—Mr. J. A. Wentz has been appointed General Freight Agent. All correspondence relating to the freight business of this company should be addressed to him, at the general freight office, St. Louis. Mr. R. W. Clarke will continue as General Ticket and Passenger Agent, Cashier and Paymaster. Correspondence in these departments should be addressed to him as heretofore.

Railway Employes' Mutual Benefit Association.—At the annual meeting in Indianapolis, March 10, the following officers were chosen: President, A. D. Reid, Chicago & Alton; Vice-President, R. H. Hill, Lake Shore & Michigan Southern; directors, E. D. Parke, Lake Shore & Michigan Southern; L. A. Ash, Empire Line; H. B. Maxwell, Chicago, Burlington & Quincy; George O. Manchester, Michigan Central; E. M. Whitlock, Cleveland & Pittsburgh; C. H. Felton, Empire Transportation Company; D. Kenyon, Lake Shore & Michigan Southern; Robert Emmet, Vandalia Line; A. McKey, Blue Line. The directors chose J. R. Wood Secretary and T. C. Hatch Treasurer, both of Chicago.

New Orleans, Mobile & Texas.—Edwin D. Morgan and James A. Raynor have been appointed Receivers by the United States Circuit Court.

Rensselaer & Saratoga.—Mr. H. C. Hall has been appointed Assistant Superintendent in charge of the completed portion of the New York & Canada road.

Louisville, New Albany & Chicago.—Mr. W. O. Hamilton has been appointed Assistant Roadmaster, with head-quarters at Michigan City, Ind.

Michigan Central.—Mr. E. C. Brown has been appointed Division Superintendent in charge of the Main line and Air line divisions and the South Bend and Joliet branches, with office at Jackson, Mich. Mr. Brown has been for some time on the Chicago, Burlington & Quincy at Burlington, Ia.

San Benito.—The first board of directors of this new company is as follows: A. P. Boyd, H. W. Cuthran, Thomas Flint, J. D. Fowler, T. A. Hawkins, T. McMahon, Uriah Wood. The company's address is Hollister, Cal.

International & Great Northern.—Mr. Samuel Sloan has been chosen President in place of J. S. Kennedy, resigned on account of ill health. Mr. Sloan is President of the Delaware, Lackawanna & Western Company.

Rhinebeck & Connecticut.—Mr. Louis Blankenhorn has been appointed General Passenger and Freight Agent. He has been for some time on the West Wisconsin and was formerly connected with the Southern Minnesota.

Pacific Mail Steamship Company.—Mr. John Riley, of New York, has been chosen a director, in place of D. D. Colton, who declined serving.

Minneapolis & Northwestern.—This company was recently organized at Minneapolis, Minn., by the election of Hon. R. B. Langdon, President, and George B. Wright, Secretary.

Peneboc & Lake Megantic.—At the annual meeting, March 13, directors were chosen as follows: James W. Emery, Geo. K. Jewett, Noah Woods, Arad Thompson and M. S. Drummond. The directors subsequently elected James W. Emery President and J. F. Rawson, Clerk and Treasurer.

Missouri, Iowa & Nebraska.—Mr. George Q. Adams, formerly Master Mechanic, has returned to the employ of the company.

Buffalo & Jamestown.—The new board of directors has elected Jewett M. Richmond, President; James Adams, Vice-President; Abraham Altman, Treasurer; Peter C. Doyle, Secretary.

Iowa Southwestern.—George J. Boal, of Iowa City, Ia., and Judge Thayer, of Clinton, Ia., have been chosen directors to fill vacancies in the board.

Indianapolis, Bloomington & Western.—Col. C. C. Smith has been appointed Assistant to the Receiver with the title of General Agent. Mr. H. L. Cooper, late of the Hannibal & St. Joseph, has been appointed Master Mechanic in place of Mr. T. V. Losey, resigned.

Kingston & Pembroke.—The following officers have been elected for the ensuing year: President, C. F. Gildersleeve; Vice-President, John Fraser; Second Vice-President, Dr. Sullivan; Secretary and Treasurer, Mr. Cline; Counsel, James O'Reilly, Q. C.; Solicitor, C. V. Price.

Delaware & Hudson Canal.—Mr. George D. Belden has been appointed Chief Train Dispatcher of the Rensselaer & Saratoga Railroad Department. Mr. Belden was formerly for a number of years on several Illinois lines and for 2½ years past he has been on the Syracuse, Binghamton & New York at Syracuse.

Fairmountdale & Squan Village.—At the annual meeting recently the following directors were chosen: H. Allair, I. S. Buckalew, A. A. Higgins, C. S. Hinckman, A. C. McLean, A. W. Markley, J. B. Rue, Paul Thurlow, S. L. Thurlow. The board elected I. S. Buckalew, President; A. C. McLean, Secretary; J. B. Rue, Treasurer.

General Passenger & Ticket Agents' Association.—At the regular meeting in Cincinnati, March 19, the following officers were chosen: President, D. M. Boyd, Jr., Pennsylvania; Vice-President, C. F. Atmore, Louisville & Nashville; Secretary, Samuel Powell, Chicago, Burlington & Quincy.

Chicago, Burlington & Quincy.—Mr. D. B. Sibley has been appointed Purchasing Agent to succeed Mr. H. I. Higgins, who, after many years' service in that office, has resigned to enter the firm of Hale & Co. Mr. Sibley has been store-keeper heretofore.

Utah Western.—John W. Young is President; H. B. Clauson, Vice-President; John N. Pike, Secretary; H. B. Kimball, Treasurer. The general office is at Salt Lake City, Utah.

Iowa Midland.—At the annual meeting in Clinton, Ia., recently, the old board of directors was re-elected as follows:

John F. Tracy, M. L. Sykes, H. H. Porter, S. B. Howe, E. B. Bailey and J. B. Redfield. The road is controlled by the Chicago & Northwestern.

PERSONAL.

—Mr. James Laurie, an able and widely-known engineer, died suddenly in Hartford, Conn., March 16, at the age of 70 years. He was a native of Scotland and had been Chief Engineer of the Warwick and Worcester, the New Jersey Central and the Nova Scotia roads. He was engineer of the iron bridge across the Connecticut River at Warehouse Point, and was for many years in the employ of the State of Massachusetts as consulting engineer on the Hoosac Tunnel. Of late years he has lived quietly in Hartford, occasionally acting as consulting engineer on important works.

—Mr. James L. Wheeler, Superintendent of Track of the Morris & Essex Division of the Delaware, Lackawanna & Western Railroad, has resigned his position, the resignation to take effect April 1.

—A somewhat unusual combination of offices is found in Connecticut where Mr. Alfred Beers, who has been a conductor on the Naugatuck Railroad for 25 years, is also a deacon in a congregational church. We fear that very few railroad men are qualified to fill the latter office.

—Rufus Hatch, Managing Director, and Mr. Gamble, Secretary of the Pacific Mail Steamship Company, have resigned their respective positions.

—Mr. J. N. McCullough, Vice-President of the Pennsylvania Company, is recovering rapidly from the injuries received in the accident on the Pittsburgh, Cincinnati & St. Louis road some weeks since. General Freight Agent Stewart, who was hurt at the same time, has entirely recovered.

TRAFFIC AND EARNINGS.

Railroad Earnings.

The following railroads have reported earnings:					
Year 1874:	1874.	1873.	Inc. or Dec.	P. c.	
Knox & Lincoln.....	\$161,568 93	\$141,720 35	Inc. \$19,848 58	14	
Expenses.....	78,725 56	69,830 84	Inc. 8,894 72	12½	
Net earnings.....	\$83,843 37	\$71,889 51	Inc. \$10,953 86	15½	
Earnings per mile.....	\$3,297	\$2,892	Inc. \$405 14		
Per cent. of expenses.....	48.73	49.27			
New Jersey Midland.....	\$529,725 11				
Expenses.....	405,960 68				
Net earnings.....	\$123,764 43				
Earnings per mile.....	\$6,232				
Per cent. of expenses.....	76.64				
Southwest Pennsylvania.....	\$222,367 86				
Expenses.....	107,547 74				
Net earnings.....	\$114,820 12				
Earnings per mile.....	\$4,493				
Per cent. of expenses.....	48.36				
West Wisconsin.....	\$384,920 10	\$809,188 97	Inc. \$1,751 13	17½	
Expenses.....	691,107 50	691,974 90	Inc. 105,132 60	17½	
Net earnings.....	\$187,812 60	\$277,214 07	Dec. \$89,401 47	32½	
Earnings per mile.....	\$4,413	\$7,710	Dec. \$3,297	17½	
Per cent. of expenses.....	78.78	68 11			

Month of January:

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
New Jersey Midland.....	\$31,881	\$22,097	Inc. \$9,784	62½

Month of February:

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Peoria & Rock Island.....	\$34,930			
Expenses.....	24,001			
Net earnings.....	\$10,929			

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Great Western, week ending Feb. 26.....	\$18,594	\$21,709	Dec. \$3,115	14½

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Grand Trunk, week ending Feb. 27.....	\$7,200	\$6,100	Inc. 1,100	9

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
St. Louis, Iron Mt. & So., 1st week in March.....	\$72,300	\$65,482	Inc. \$6,818	10½

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Denver & Rio Grande, 2d week in March.....	6,367	5,385	Inc. 972	18

Railroad Traffic.

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Knox & Lincoln, year 1874:				
Tons of freight moved.....	32,960	13,699	Inc. 19,261	140½
Passengers carried.....	108,914	91,798	Inc. 17,116	18½

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Utah Central, February:				
Tons of freight moved.....	11,351	9,601	Inc. 1,750	18½
Utah Southern, February:				
Tons of freight moved.....	7,412	6,236	Inc. 1,176	19

Flour and Grain Movement.

The Produce Exchange Weekly reports:

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Flour:				
Week ending March 13:				
Lake ports' receipts.....	81,592	105,216	Dec. 23,624	23.5
" shipments.....	93,749	94,795	Dec. 1,046	1.1
Atlantic ports' receipts.....	140,593	171,378	Dec. 30,785	17.8
Jan. 1 to March 13:				
Lake ports' receipts.....	779,588	1,314,956	Dec. 535,368	40.6
" shipments.....	773,188	1,182,872	Dec. 409,684	34.6
Atlantic ports' receipts.....	1,481,872	2,285,912	Dec. 804,040	35.2
Aug. 1 to March 13:				
Lake ports' receipts.....	3,333,568	3,984,114	Dec. 650,546	16.3

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Wheat:				
Week ending March 13:				
Lake ports' receipts.....	721,940	671,603	Inc. 50,337	26.3
" shipments.....	273,265	407,767	Dec. 134,502	33.0
Atlantic ports' receipts.....	245,470	512,296	Dec. 266,826	52.1
Jan. 1 to March 13:				
Lake ports' receipts.....	7,436,352	15,553,665	Dec. 8,117,313	52.2
" shipments.....	2,395,208	6,948,602	Dec. 4,553,394	68.9
Atlantic ports' receipts.....	2,963,930	8,853,015	Dec. 5,889,085	68.5
Aug. 1 to March 13:				
Lake ports' receipts.....	41,967,088	56,888,640	Dec. 14,921,552	26.2

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Corn:				
Week ending March 13:				
Lake ports' receipts.....	887,455	433,198	Inc. 454,257	104.9
" shipments.....	303,137	169,874	Inc. 133,263	78.5
Atlantic ports' receipts.....	921,422	439,183	Inc. 482,239	109.8
Jan. 1 to March 13:				
Lake ports' receipts.....	8,933,382	6,701,434	Inc. 2,231,948	33.3
" shipments.....	3,736,109	2,062,827	Inc. 1,673,282	81.1
Atlantic ports' receipts.....	11,484,100	6,860,408	Inc. 4,623,692	67.4
Aug. 1 to March 13:				
Lake ports' receipts.....	27,593,088	39,339,069	Dec. 5,745,981	17.2

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Grain of all kinds:				
Week ending March 13:				
Lake ports' receipts.....	3,029,245	1,426,604	Inc. 1,602,641	42.2
" shipments.....	822,027	841,826	Dec. 19,799	2.3
Atlantic ports' receipts.....	1,531,568	1,263,797	Inc. 267,766	21.2
Jan. 1 to March 13:				
Lake ports' receipts.....	20,556,304	26,099,363	Dec. 5,543,059	20.9
" shipments.....	5,285,289	11,711,141	Dec. 3,427,853	29.3
Atlantic ports' receipts.....	17,736,174	19,953,186	Dec. 2,216,012	11.1
Aug. 1 to March 13:				
Lake ports' receipts.....	90,444,206	113,188,792	Dec. 22,744,586	20.1

Year 1874:	1874.	1873.	Inc. or Dec.	P. c.
Wheat:				
Week ending March 13:				
Lake ports' receipts.....	721,940	671,603	Inc. 50,337	26.3
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ager, subject to the orders of the Governor and Council, who have the power to fix rates of toll to be paid for its use. In fixing the rates due regard is to be had to the commercial value of the tunnel and to the development of business as well as to its cost. The tunnel and State road are to be held open to the use of any road which may desire to make connections therewith, subject only to the payment of tolls and to such rules as may be established to regulate the movement of the traffic.

This arrangement is understood to be favored by the companies most interested, which do not desire consolidation, at any rate until the tunnel and the Troy & Greenfield road have been entirely completed at the cost of the State.

There is a possibility that the Governor may veto the bill, as he is known to be opposed to the toll-gate plan.

Southeastern, of Canada.

It is stated that a temporary lease of this road for one year has been made to the Connecticut & Passumpsic Rivers Railroad Company. Through trains will be run to Montreal over the road, the same as last year, but on a better time table. It is understood that the Boston, Concord & Montreal is really a partner with the Passumpsic company in the lease, and that it will be renewed if it proves satisfactory. The road is 79 miles long, from St. John's, P. Q., to Newport Vt., of which 33 miles (Richford to Newport) is leased from the Missisquoi & Clyde Rivers Company. It is part of the Passumpsic company's line to Montreal.

New Orleans, Mobile & Texas.

The United States Circuit Court has appointed E. D. Morgan and James A. Haynor receivers of this road.

That portion of the road between New Orleans and Mobile has been in possession of the same gentlemen as trustees under the first mortgage since January 16, 1875, and has since been operated by them.

Union Pacific.

The trains on the Denver Pacific will hereafter make close connections with the Union Pacific trains at Cheyenne.

Meetings.

The following companies will hold their annual meetings at the times and places given:

Columbus & Toledo, in Columbus, O., April 14.
Chicago & Alton, at the company's office in Chicago, April 5, at 10 a. m.

Joliet & Chicago, in Chicago, April 5.
St. Joseph & St. Louis, at the office, No. 417 Olive street, St. Louis, April 29.

St. Louis, Jacksonville & Chicago, in Chicago, April 5.

Panama, in New York, April 5.

Gulf, Western Texas & Pacific, in Indianola, Tex., April 5.

Baltimore, Pittsburgh & Chicago, in Auburn, Ind., April 7.

Port Dover & Lake Huron.

The contract for the balance of the rails required to lay the track from Woodstock, Ont., to Stratford has been taken by a New York firm. The contractors will begin laying track as soon as the weather permits, beginning at Simcoe, where a lot of rails has already been delivered. The balance are to be delivered at Tavistock.

Toronto, Grey & Bruce.

An engine and car-load of laborers reached Owen Sound, Ont., March 17, from Toronto, being the first train through in 44 days, during which time the road has been blocked by snow.

Erie.

The Watson Manufacturing Company of Paterson, N. J., has taken a contract to replace the three spans of the bridge over the Delaware at Saw Mill Rift near Port Jervis, which were destroyed by the recent freshet. The new spans are to be Post trusses of iron, one of 163 feet and two of 152 feet each. The first span is to be finished in 15 days from the signing of the contract and the other two each within six days thereafter, giving 27 days time in all. The price is \$70,000 cash.

The Pacific Railroads and the Tax on Net Earnings.

The Attorney General of the United States has ordered suits to be begun against the Union Pacific for \$1,040,000, and the Kansas Pacific for \$300,000, the Central Branch and the Sioux City & Pacific for smaller sums, money claimed by the United States as being the tax of 5 per cent. on net earnings due from the companies. The decisions of the Supreme Court in the case of St. John against the Erie Railway Company will have an important bearing on these suits. In that case it was decided that interest, rentals and other similar charges, as well as operating expenses, must be deducted from the gross earnings to determine the amount of the net earnings from which dividends on preferred stock could be claimed, but the case of the Union Pacific is not exactly a parallel one, though it has been assumed to be.

Springfield & Longmeadow.

The City of Springfield has applied to the Supreme Court for a writ of mandamus to compel the recognition of the six directors chosen to represent the city stock, whose eligibility the private stockholders contest on the ground that they are not stockholders, while the city adheres to its right to choose any representatives it pleases.

General Passenger and Ticket Agents' Association.

The semi-annual meeting was held in Cincinnati, beginning March 19 and lasting four days, the time being mainly occupied by the usual adjustment of rates. No change was made in through fares and none of any importance in local rates. No representatives were present from the Baltimore & Ohio or the Ohio & Mississippi and no effort was made to adjust differences between those and other companies.

Resolutions were passed urging that the claims of other roads on a bankrupt company for ticket balances should be preferred debts.

The next semi-annual-meeting will be held in Saratoga, N. Y., September 17.

Baltimore & Ohio.

Repair shops are to be located at Garrett, Ind., on the Chicago Division, 120 miles east of Chicago. The company has bought a large tract of land and will build a round-house, machine shop, car repair and smith shops. It will be a division station, the end of the engine runs from Chicago on the west and Chicago Junction on the east end.

Chicago, Danville & Vincennes.

The bondholders' meeting in New York, March 19, was largely attended, and statements were heard from Mr. Hammond, one of the recently appointed receivers, on the condition of the road. After some discussion a committee was appointed to examine into affairs and report to a future meeting. The committee consists of Samuel S. Constant, John M. Denniston, F. W. Huidekoper, Chandler Robbins, W. B. Stevens, A. A. Sumner and John M. Wheelock.

New York & Oswego Midland.

The Receivers have issued the following order: "Hereafter freight intended for transportation over the line of the New York & Oswego Midland Railroad will be received under the following conditions only:

"Deliveries will be made at such times as may be most convenient, it being understood that promptness cannot be expected."

"All freights to be paid in advance."

"When received from connecting roads, no back charges to be paid."

"As there will be no agents except at the principal stations, a release must be given from all claims or liability for loss or damage of property left at stations when the consignees are not present to receive it."

It is stated that one train a day will be run from Middletown to Ellenville, over the main line and Ellenville Branch.

Illinois Central.

This company now sells through and excursion tickets between Chicago, Vera Cruz and the City of Mexico. The route is by steamer from New Orleans to Vera Cruz and thence to Mexico by railroad. The fare from Chicago to Vera Cruz is \$98, and to Mexico \$116; from Chicago to Vera Cruz and return, \$148. It purposes soon to sell through tickets from Chicago to Havana, via New Orleans.

New Jersey Midland.

President Wortendyke has made a long statement as to the affairs of this company, which is mainly a repetition of the directors' statement, heretofore noted. In conclusion, he promises to submit shortly a plan for the reorganization of the company looking forward to the full payment of all the bonded and floating debt.

There is little doubt, however, that the company is hopelessly bankrupt and no plan can be devised which will relieve it permanently while it has its present load of debt to carry.

Rockford, Rock Island & St. Louis.

The first mortgage bonds of this road were issued under two trust deeds, the first dated June 15, 1868, being given to secure \$5,000,000 bonds and covering the road from Sterling to Rock Island and thence to Monmouth. The second deed was dated October 23, 1868, covered the whole road and was made to secure the \$5,000,000 bonds issued under the first deed and \$4,000,000 additional. During the foreclosure suit now in progress certain holders of bonds of the first issue put in a claim to priority, alleging that that issue had a prior lien to the second issue on the road from Sterling to Monmouth and also an equal lien on the rest of the line. After hearing argument in the matter the United States Circuit Court has decided that the claim is substantially correct and that the second issue of \$4,000,000 has only a second lien on the property named in the first trust-deed, the line from Sterling to Monmouth.

Poughkeepsie & Eastern.

The committee appointed for that purpose have prepared a plan of reorganization which was submitted for the approval of the bondholders at a meeting held in Poughkeepsie, N. Y., March 19, and was adopted by them. The plan contemplates the organization by the bondholders of a new company, to be called the Poughkeepsie, Hartford & Boston Railroad Company.

Monticello & Port Jervis.

A meeting of the bondholders is to be held at the office of Lord, Day & Lord, No. 68 William street, New York, March 30, at 2 p. m., to take action respecting the disposition of the road under the foreclosure proceedings now pending.

The Floods in the Susquehanna Valley.

In addition to the damage noted last week, much destruction was caused by the ice-gorge and flood about Wilkesbarre and Pittston on the North Branch. The track of the Pennsylvania & New York road above Pittston was covered with ice and badly torn up for several miles, and the Coxton yard was entirely flooded, a number of coal cars being damaged and broken up by ice-cakes. The round-house was also badly damaged.

On the West Branch some damage was done to the bridges on the Philadelphia & Erie, but the full force of the spring floods has not been felt yet.

Further down the river much damage was done. The Pennsylvania Railroad bridge at Columbia was damaged, and the line of that road, along the river between Columbia and Middletown. The track was torn up by ice cakes, and several canal boats were left on the road-bed when the water fell. The road was completely blocked for a week, compelling all trains to go by the Mount Joy line, which, however, is the route ordinarily taken by passenger trains.

Near the mouth of the river another ice-gorge and flood nearly destroyed two miles of the Port Deposit Branch of the Philadelphia, Wilmington & Baltimore, but the great bridge of that road at Havre de Grace escaped damage.

Knoxville & Charleston.

The lessees being apparently unwilling or unable to repair damages and resume the running of trains, a number of citizens of Maryville have offered to lease the road, or to rebuild the Little River bridge upon reasonable terms. Meantime the travel over the road is limited to what can be carried by hand-cars and a skiff ferry. The bridge at Bristol Creek is being rebuilt by a public-spirited citizen who is willing to take his chances of repayment. The State will cancel the present lease, if the lessees do not reopen the road soon.

Little Rock & Fort Smith.

A contract has been let for an additional five miles of road, which is to be done by April 30, and which will carry the line to Ozark, Ark., 125 miles from Little Rock.

Portland & Ogdensburg—Eastern Division.

Notwithstanding the severity of the weather and the great depth of snow, the contractors, Messrs. Fuller & Harding, have vigorously prosecuted the work of grading during the winter. Between Bem's Station, the present end of the track, and the Fabian House, there have been upward of 700 men employed on construction throughout the winter. Although the line runs through the heart of the White Mountains, the location is very good, the curves being remarkably easy for a mountain road and the grading comparatively light. The company has contracted with the Niagara Bridge Works of Buffalo for a wrought-iron viaduct at Frankenstein and another at Willey Brook, and also for an iron bridge over the Ammonoosuc River near the Fabian House. It is confidently expected that the road will be opened through to a connection with the Boston, Concord & Montreal Railroad by next July.

Utah Western.

The part of the track laid in 1874 was 16 miles long. March 12 there were 20 miles in operation, and the company expected to open five miles more in ten days or so, and soon to complete the road, which is to be 45 miles long. The company reports a good and growing business.

Chicago & Illinois River.

The report of the lease of this new road to the Chicago & Alton is confirmed. The terms are not stated, but it is said that the rental is a proportion of the gross earnings. The company has large coal interests on the line of its road, and announces its intention to extend the line from the present terminus at the Mazon River, southwestward to Streator. The Chicago & Alton, however, has leased only 20 miles now completed. The grading is mostly done on the extension, and the rails are to be laid this spring.

The Western Railroad Bureau.

The Commissioners have issued a circular notifying managers of the dissolution of the Bureau, which will no longer act

as an organized body, the managers of the leading lines having given notice of their withdrawal from the agreement and their refusal to be bound by it hereafter.

Hannibal & St. Joseph.

The trustees under the land mortgage of 1863 will receive until April 2 sealed proposals for the sale to them of \$50,000 of the bonds issued under that mortgage. Proposals should be addressed to the trustees at their office, No. 26 Sears Building, Boston, or to Wm. H. Swift, care of Ward, Campbell & Co., No. 56 Wall street, New York.

It is understood that the difficulties in the management which caused the recent removal and subsequent restoration of Mr. Towne have been adjusted and a good understanding reached.

Connecticut Central.

Work has been going on for some time on the deep cuts and other heavy work, and more than half the grading and masonry between Hartford and Broad Brook is done. The lighter grading will not be begun until summer has fairly set in.

Kingston & Pembroke.

The track is now laid from Kingston, Ont., northward 39 miles and the work is still progressing. An agreement has been made for the use of the Grand Trunk track into Kingston, and of its passenger and freight depots there, and in addition water front property has been bought for wharf purposes. The Government bonds on 20 miles has been paid over, but only \$10,000 of the Frontenac County debentures, instead of \$37,000 which has been earned. It is proposed to build a branch from the main line to Perth and to Ottawa.

Iowa Southwestern.

The board has voted to extend the contractor's time for completing the road from Clinton to Iowa City to October 1, 1875. It had expired March 15.

Minneapolis & Northwestern.

This newly organized company purposes building a narrow-gauge road from Minneapolis, Minn., northwestward through Osseo and Buffalo.

Philadelphia & Reading.

The employees of the road having been required to give up their membership in the Mechanics' and Workingmen's Benevolent Association, a meeting was held in Pottsville, March 21, at which nearly 2,000 men, including engineers, firemen, train hands and trackmen, were present. It was resolved to stand by the Association. These men were to be discharged from the company's service March 22. The feeling against the company, both among railroad employees and miners, is said to be very bitter.

The scarcity of coal caused by the suspension of mining in the Schuylkill region has obliged the company to use bituminous coal in some of its locomotives, with results not always favorable, they having been constructed especially to burn anthracite.

South & North Alabama.

This company has laid claim to certain lands which are near its intersection with the Alabama & Chattanooga. The lands were covered by the grants of both companies, but were awarded to the Alabama & Chattanooga on account of priority of location. The lands of that road subsequently passed into the possession of the State of Alabama and the South & North Company now asks that the State convey to it those lands which were covered by its grant but awarded to the other company.

Canada Southern.

The running of through trains, which had been stopped for several weeks on account of the ice-blockade in the Detroit River, was resumed March 17. The rates between Buffalo, Detroit and Toledo have been cut down to compete with those of the Great Western and Grand Trunk.

Toledo, Peoria & Warsaw.

The Burlington Branch has been reopened and trains began running to Burlington again March 21. Owing to difficulties as to payment of rental, trains have ceased to run over the Keokuk bridge into Keokuk and now stop at the Illinois side of the river.

Pueblo & Arkansas Valley.

It is proposed to organize a company by this name to build an extension of the Atchison, Topeka & Santa Fe road from its present terminus at Grenada, Col., west to Pueblo. The plan is to issue \$15,000 per mile of stock and \$14,000 per mile in bonds, \$2,000 of the latter to be retained for future improvements. The Atchison, Topeka & Santa Fe Company will agree to allow a rebate of 15 per cent. on all business received from the road, this amount to be applied to payment of interest and the formation of a sinking fund, and to be gradually decreased as the sinking fund increases. Stock to be issued in return to the amount of the sinking fund. The bonds and stock are to be issued only as the road progresses.

Pennsylvania.

A special assignment of cars to shippers of semi-bituminous coal from the Clearfield and Broad Top regions will be made, to take effect April 1.

The company has concluded a long pending negotiation for the purchase of a strip of land 800 by 100 feet near the Outer Depot in Pittsburgh, which is to be used for additional tracks. The property was owned by the Western Pennsylvania Hospital, and the price paid is a perpetual annuity of \$4,000. The construction of an iron highway bridge over the tracks at that point will be begun shortly, being one of the improvements called for by the contract with the city.

Warwick.

A special meeting of the stockholders was held in Providence, R. I., March 19. After hearing an address from Mr. G. W. Besch, one of the contractors, the meeting adjourned until March 30, in order to give stockholders an opportunity to settle up their indebtedness to the company. A committee was appointed to urge the prompt payment of subscriptions.

Detroit & Milwaukee.

The President, Mr. C. C. Trowbridge, has addressed a letter to a committee of bondholders at Hamilton, Ont., further explaining and advocating the plan of adjustment proposed by the company. He urges strongly the difficulty of getting all the bondholders to join in foreclosure proceedings and states that holders of over \$3,000,000 of bonds have already assented to the adjustment.

North Carolina Standard Gauge.

The North Carolina Legislature has passed a law, which is general in its terms, but is apparently intended to apply to the recent change on the North Carolina road. The law provides that no railroad now in the State with the gauge of 4 feet 8½ inches shall change the same, and all railroads hereafter constructed in this State shall have the same gauge, 4 feet 8½ inches. The penalty for constructing or changing the gauge of any railroad contrary to the provisions of the preceding section shall be \$50 per day per mile for every day such railroad is in use, and in addition the President and Directors, Secretary and Treasurer, or any officer, servant or employee shall be guilty of a misdemeanor, and shall be fined not less than \$500 nor more than \$1,000, and imprisoned not less

than three nor more than six months; and it shall be the duty of the Governor of this State to cause to be instituted immediate proceedings for the recovery of such penalty and the infliction of such punishment in case of any violation of the act. It however excepts the Spartanburg & Asheville and the extensions of the Blue Ridge road, and also all roads of 3 feet gauge.

Dardanelle, Dover & Harrison.

Arrangements are being made to organize a company to build this projected road from Dardanelle, Ark., on the Arkansas River, northward to Harrison, a distance of about 70 miles.

Atlantic & Lake Erie.

At an adjourned meeting in Bucyrus, O., March 17, the stockholders voted to increase the capital stock from \$5,000,000 to \$12,000,000, and also to ratify a contract with the Ohio Railroad Construction Company for the completion of the entire line of the road.

Grand Rapids & Indiana.

This company has contracted for 20,000 tons of new rails for renewals. They are to be laid mainly south of Grand Rapids.

Saginaw Valley & St. Louis.

A special meeting of the stockholders is to be held in Saginaw City, Mich., May 1, to vote on the question of increasing the capital stock to \$850,000 and extending the road westward from St. Louis to Grand Rapids.

Whitewater Valley.

It is stated that this road has been leased to the Indianapolis, Cincinnati & Lafayette, the lessees working it for the cost and paying over the net earnings as rental. The road is 70 miles long, from Valley Junction, O., north by west to Hagerstown, Ind.

Detroit, Lansing & Lake Michigan.

The offices of the Assistant Treasurer, Paymaster, Auditor, Purchasing Agent, Chief Engineer and General Freight and Passenger Accountant have been removed from Detroit to Ionia, Mich.

Evansville & Crawfordsville.

This company has purchased its first lot of steel rails, which are to be laid near Patoka, Ind.

St. Joseph & St. Louis.

The annual meeting has been postponed to April 29, the Secretary having neglected to make the proper publication of the notice for the meeting of March 2. Many of the stockholders having expressed dissatisfaction with the proposed lease to the St. Louis, Kansas City & Northern, the board of directors has appointed a committee to consider all matters connected with that lease and to report thereon as soon as possible.

Chesapeake & Ohio Canal.

In view of the reduction of freights on Cumberland coal by the Baltimore & Ohio and the Pennsylvania Railroad Companies, it is stated that the canal tolls (including the Cumberland wharfage) will be reduced from 59 to 51 cents per ton. It is probable that there will also be a reduction of boat charges. Water was to have been let into the canal March 20, and navigation opened March 25.

Davenport & St. Paul.

On application of the Receiver to have certain property released from attachments issued by the Iowa courts, the United States Circuit Court has ordered 54 cars to be turned over to the Western Car Company, which claimed to own them. Certain ties and lumber were also ordered to be released.

Mr. George H. French having asked to be relieved from his charge as Receiver, the Court has granted his application, and has appointed John E. Henry, of Davenport, Ia., as Receiver.

Boston, Hartford & Erie.

The Supreme Court of Massachusetts has appointed Francis W. Hurd a master to audit the accounts of the trustees under the Berdell mortgage, who have operated the road since September, 1871, to determine the amount to be allowed them for disbursements and compensation, and to decide upon the form of the conveyance from the trustees to the New York & New England Railroad Company.

The Boston Advertiser says: "By an act passed by the last Legislature, the Lieutenant-Governor was empowered to draw his warrant for \$250,000, to be paid to the New York & New England Railroad Company, the condition being that the company should first raise \$500,000. December 28, 1874 the subscription list was presented to the Lieutenant-Governor complete, and he drew his warrant. The checks were turned over to Seth Turner, counselor, and he was empowered to transfer them to the company when the subscriptions were all paid in. The subscribers came promptly forward, till Charles M. Strauss was reached on the list, with \$250,000 against his name. He was unable or unwilling to raise the whole amount, and put in but \$50,000. The other subscribers were discouraged by his example, they failed to pay, and since that time the matter has remained unsettled, the company making strong efforts to obtain the full subscriptions, and Mr. Turner holding for the State its checks, on which it is receiving proper interest. It is expected that the company will fulfill its part of the contract speedily."

Waxahatchie Tap.

The people of Waxahatchie, Tex., have voted the required subsidy to secure the building of a branch road from their town to the Houston & Texas Central, near Ennis, a distance of 11 miles.

Reading & Lehigh.

The transfer to the Philadelphia & Reading Company has been completed, and the road is now known as the Berks & Lehigh Branch of that road. The line has been connected with the Lebanon Valley Branch outside of Reading by a spur about one-quarter of a mile long, and all trains now run to and from the Philadelphia & Reading depot. The old depot has been given up.

Northern Central.

The plans have been completed for the new building which is to be built in Baltimore for the general offices of the company. It will be located at the corner of Calvert and Center streets, and will be three stories in height, with a mansard roof. The front will be of iron. The first floor will be used for offices of the Purchasing Agent and other officers of the Northern Central and Pennsylvania roads; the second floor will be occupied by the Treasurer, board rooms and committee rooms; the third floor by the Auditor and other officials, and the mansard-roof portion as a place for the storage of the papers, books and archives of the company. The estimated cost of the new building will be \$60,000.

Southern Minnesota.

The lands granted to this company were ordered to be assessed for taxes in 1874, the State claiming that the company had disposed of them, it having conveyed them in trust to trustees to secure its bonds. The tax was contested and the Minnesota Supreme Court has decided that the conveyance in trust is not such a sale or transfer as to subject the lands to taxation.

Railway Employees' Mutual Benefit Association.

The annual meeting was held in Indianapolis, March 11, twenty-three subordinate associations being represented.

The President made an address stating that the society was in a prosperous condition. The Secretary reported receipts for the year of \$47,843.93 and a cash balance of \$4,217.96 at its close.

The by-laws were altered so as to define more particularly the Secretary's duties and to lower the limit of age for admission from 55 to 50 years.

It was voted to hold the next meeting at Niagara Falls, June 14, 1876.

Memphis & Little Rock.

Under the authority of a deed of trust made to secure \$300,000 bonds of this company, and upon request of certain holders of those bonds, James Elder and Sam. Tate, trustees, give notice that they will sell at public auction in Memphis, Tenn., May 3, the property known as the Navy Yard tract in that city.

Western, of North Carolina.

In this suit, which has been pending a long time in the New York Supreme Court, and which was brought to recover 425 bonds of the company which were deposited with L. P. Baine, a decision has been rendered by the referee, declaring the railroad company to be entitled to possession of the bonds. The bonds, as it seems, are held by Baine & Co., who refused to give them up, asserting that they hold a lien on them for commission and advances. An order was made to arrest Baine, but he appeared and deposited the bonds in Court subject to its decision on the referee's report.

Northern Pacific.

A meeting of the bondholders was held in New York, March 18, a large number being present. A report was submitted by the President of the company from which it appears that the bonds issued were \$31,696,370, of which \$1,254,970 have been canceled by the Land Department, leaving \$30,441,300 outstanding. The floating debt is \$634,800. The total sales of land up to March 1 were, in Minnesota and Dakota, 310,390 acres for \$1,669,815.47, and in Washington Territory, 35,148 acres for \$300,887.56. The total earnings and expenses of the road up to March 1 were:

	In Minnesota.	Pacific Div.	Total.
Earnings.....	\$544,426 78	\$102,394 79	\$646,821 57
Expenses.....	460,066 23	62,769 19	522,835 42
Net earnings....	\$84,360 55	\$39,625 60	\$124,086 15

The total net earnings since the opening of the road were thus about four-tenths of one per cent. on the funded debt.

After considerable discussion, resolutions were adopted expressing confidence in the directors and appointing a committee of seven to confer with the directors and report at a future meeting. The committee, appointed by the chairman, is as follows: Ex-Gov. Abner Coburn, of Skowhegan, the Hon. Wm. Windom, Minnesota; Johnston Livingston, New York; George M. Rice, Worcester, Mass.; H. H. Houston, Philadelphia; H. E. Johnston, Baltimore; Wm. McKnight, Pittsburgh, Pa.

Cincinnati Southern.

The bids for the Kentucky River Bridge were opened March 15. Sixteen bids were received, fourteen for a truss bridge, one for an arch and one for a wire suspension bridge. As a truss bridge would be 1,100 feet long, as a suspension bridge 1,240 feet, and its height above the river will be 275 feet. The bids were as follows, for a truss bridge: McNairy & Claffin, Cleveland, O., \$289,000; American Bridge Company, Chicago, \$294,940; Soulerin, James & Co., Milwaukee, \$349,000; Baltimore Bridge Company, three bids, \$344,000, \$350,000 and \$358,000; Louisville Bridge & Iron Company, \$355,000; Watson Manufacturing Company, Paterson, N. J., two bids, \$348,000 and \$360,000; Clark, Reeves & Co., Philadelphia, \$369,268; Flad & Pfeiffer, St. Louis, \$374,760; Keystone Bridge Company, Pittsburgh, Pa., \$409,800; Charles Macdonald, New York, two bids, \$375,000 and \$409,000. For an arch bridge, O. G. Leopold, Cincinnati, \$410,000. For a suspension bridge, John A. Roebling's Sons, Trenton, N. J., \$410,000. The award will be made in a few days.

The following grading contracts were let March 16 by the trustees: Section 59, Division D, to J. S. Wolfe & Co.; Section 12, 13, 22 and 24, Division C, to M. Lynch & Brother; Sections 16, 17, 18, 19, 20 and 21, Division C, to Henry Stewart & Co.; Sections 14, 15 and 23, Division C, to Ryan Brady; completion of King's Mountain Tunnel to Boyle & Roach.

New York & Canada.

The heavy rock cutting on section 7 is now well advanced. The rock work at Trembleau Mountain is all done, and the grading from that point to Wickham Marsh, near Port Kent, is to be done by June 1. An engine and construction train will soon be put on the road at Port Kent and track laid in both directions from that point. The grading on section 8, from the Ausable River to Plattsburgh, has been let to Mr. Doty, who is to push the work, which is comparatively light.

Victoria.

A dispatch from Kinmount, Ont., says that work has been temporarily stopped, pending negotiations with the English Land Company and on account of a misunderstanding as to the subsidy from the Ontario Government.

New York & Eastern.

Stanton & Balch, who contracted with this company to construct the road, better known as the Parallel road between New Haven and New York, have petitioned the Connecticut Superior Court for the appointment of a receiver on the ground that the contract has not been carried out, and that they have been greatly damaged thereby, and can obtain nothing from the company. The case will come up at the April term.

North Shore of Canada.

It is stated that the company's difficulties have all been arranged, and that work on the road will be resumed at once.

Ashley River.

This proposed line will be about eight miles long and is to extend from the Savannah & Charleston road at Rantowles, S. C., to a point on the Northeastern Railroad about six miles from Charleston. It will be a cut-off or transfer track between those two roads by which cars can be transferred directly from one to the other, and will require the building of a bridge over the Ashley River.

California Pacific.

Grading has been begun on a branch from Vacaville, Cal., north to Winter's on Putah Creek. It is known as the Vaca Valley road.

Delaware & Bound Brook.

Work is progressing on the bridge over the Delaware River near Yardleyville and the east abutment is nearly done. The work on the bridge over the Delaware & Raritan Canal has been pushed through the winter with the hope of completing it before navigation is opened. The river bridge will be nearly 60 feet above the water and will be of iron.

The company received eight bids for the bridge over the Delaware River at Yardleyville, which included also the bridge over the Delaware & Raritan Canal on the east side, and the Delaware Division Canal on the west side of the river. The bridges are to be wrought-iron truss bridges, double track, and the track is about 80 feet above the bed of the river. Over the Delaware & Raritan Canal there are to be a draw span of 182 feet and two fixed spans 60 feet each; over the river 10 spans, five of 200 feet, one of 173 feet, one of 120 feet, one of 100 feet, and two of 66 feet; over the Delaware Division Canal

one span of 108 and two of 60 feet. The length of bridging being 2,043 feet in all.

The bids were only for the superstructure, the masonry having been let previously. They were as follows: Clarke, Reeves & Co., \$334,347; Baltimore Bridge Company, \$302,309; Kellogg Bridge Company, Buffalo, \$292,719; Alfred P. Boller, New York, \$292,565; Watson Manufacturing Company, Paterson, \$282,247; Keystone Bridge Company, Pittsburgh, \$269,922; Charles Macdonald, New York, \$263,938; J. H. Cofrode & Co., Philadelphia, \$252,525. The contract was awarded to the lowest bidder, J. H. Cofrode & Co.

San Benito.

A company by this name has been organized to build a railroad from Hollister, Cal., by way of San Juan to Millard's Landing in Monterey County. It will be 33 miles long and will connect with the Santa Cruz and the Monterey & Salinas Valley roads. The capital stock is to be \$500,000 and a considerable amount has already been subscribed.

Southern Pacific.

The grades have completed 20 miles of road-bed on the extension of the Los Angeles Division from Spadra south to the San Geronimo Pass. Work on the next 30 miles is progressing rapidly.

Work has been begun on the San Fernando Tunnel, and a large force is already employed there.

Cleveland, Tuscarawas Valley & Wheeling.

The capital stock of this company has been fixed at \$1,250,000. The company, which has been organized by the parties who bought the Lake Shore & Tuscarawas Valley road at foreclosure sale, has offered to issue new stock to the stockholders of the original company to the extent of 62½ per cent. of their former holdings, provided they will pay in 20 per cent. of the face of the new stock in cash, to repay the present owners the money expended by them in paying interest on the first mortgage bonds, expenses of organization and certain old liabilities.

Peoria & Rock Island.

The President has issued a circular urging bondholders not to join in pressing a foreclosure, but to allow the road to remain in the hands of the present Receiver and to show its ability to earn the interest on its bonds.

Longwood Valley.

Work has been begun on the grading of this road, near High Bridge, N. J., and is to be pushed. The road is now controlled by the New Jersey Central.

Worcester & Somerset.

This road, which runs from the Eastern Shore road at King's Creek, Md., to Newtown, nine miles, was to be sold at Sherin's sale at Princess Anne, Md., this week.

Peach Bottom.

The entire loan of \$200,000 for the completion of the Middle Division has been disposed of, mainly to persons resident along the line.

Bethany & Washington.

Meetings are being held and efforts made to secure the construction of a line about 25 miles long from Washington, Pa., west by north to Bethany, W. Va., and thence to the Ohio River.

Norfolk & Princess Anne.

It is proposed to build a narrow-gauge road from Norfolk, Va., due east through Kempsville and London Bridge to a point on the Atlantic coast in Princess Anne County. The road will be about 20 miles long. The bill chartering the company fixes the capital stock at \$200,000, of which the county of Princess Anne is authorized to subscribe \$50,000. The company is also to have power to buy, sell and improve lands on the line of its road.

Kokomo & Marion.

This new company purposes building a railroad from Kokomo, Ind., east 27 miles to Marion. The capital stock is to be \$500,000 and the incorporators are James A. McDowell, A. C. Snagger, Moses Bradford, Wm. Scott, N. Bell, Henry Lindley and Isaac Vanmeter.

Memphis & Knoxville.

An effort is being made to secure money for this road in Memphis, Tenn. It is designed to complete, if possible, the section of 28 miles from Henderson, Tenn., southwest to Bolivar, most of which is graded.

Richibucto Branch.

A contract has been let to J. C. Brown for the construction of this road which is to run from Richibucto, N. B., west by south to a junction with the Intercolonial. The road will be 26½ miles long and has a government grant of \$5,000 per mile.

Kansas Midland.

It is said that negotiations are pending for a permanent lease of this road to the Atchison, Topeka & Santa Fe.

Miramichi Valley.

This proposed road is to run from Chatham, N. B., southwest up the valley of the Miramichi and down the Nashua to Fredericton, a distance of nearly 120 miles. A survey of the line is to be made and a provisional organization has been made.

Woodstown & Camden.

A project is being worked up for a narrow gauge railroad from Woodstown, N. J., northeast to Camden, about 25 miles. Books have been opened for subscriptions and a company will shortly be organized.

West Wisconsin.

The bondholders met at the office of the company in New York, March 17, and after hearing a statement of its position, voted to appoint a committee to consider a plan which shall best serve their interests. The committee consists of David Dow, L. DeCorneau and A. Crane.

The company's statement shows the funded debt outstanding to be as follows:

First-mortgage land-grant bonds.....	\$8,815,500
Southern extension bonds.....	640,000
Consolidated gold bonds.....	2,500,000
Total (\$35,307 per mile).....	\$9,955,500

Of these \$370,000 Southern Extension, and \$1,471,000 consolidated bonds are held as collateral. The floating debt amounts to \$1,826,841.50, of which \$158,615.09 is on account of the North Wisconsin Company and is secured by that company's bonds. The net earnings last year were 2.7 per cent. on the funded debt.

The company's situation is complicated by the fact that the Wisconsin Supreme Court has decided that the building of the new line from Warren's Mills to Elroy, and the taking up of the old line to Tomah were illegal, a violation of the charter, and a ground for total forfeiture of the franchise. Judgment of forfeiture has not been entered but may be at any time, though the company hopes it may be withheld until next year, when legislation may be obtained to dismiss the action and legalize the new line.

A large amount of land has also been sold to settlers, which has not been released from the land-grant mortgage. The company recommends that bondholders fund nine coupons, beginning with November, 1874. During the four and

one-half years so gained it is believed that the net earnings will be sufficient to pay interest on the funded coupons and gradually retire the floating debt, leaving the whole net earnings to pay interest with thereafter.

Lake Shore & Michigan Southern.

Some time ago, in New York, John B. Prouty brought suit against the Michigan Southern & Northern Indiana Railroad Company, as owner of 500 shares of preferred stock, to have the terms on which the stock was issued enforced—such terms being the payment of 10 per cent. dividend on such preferred stock before payment of any dividend on common stock. In this suit he was successful. Meantime the company became by consolidation part of the Lake Shore & Michigan Southern. Mr. Prouty undertook in the judgment to incorporate the latter companies as defendants, on the faith of acts under which the consolidation was made, but the Court of Appeals decided that this was not the proper way. The suit has now been renewed and leave granted plaintiff by the Supreme Court to amend his complaint so as to make the consolidated company defendant.

Guaymas & Tucson.

Surveys are to be begun at once for this projected line from Tucson, Arizona, south through that Territory and the Mexican State of Sonora to the port of Guaymas, on the Gulf of California.

Central, of Georgia.

This company gives notice that the National City Bank, of New York, will pay on presentation, at par and accrued interest, the \$1,000,000 first-mortgage bonds due September 1, 1875. Holders also have the option of exchanging these bonds at par for the new consolidated bonds at 95.

Utica, Ithaca & Elmira.

This company is trying to secure the necessary authority to purchase the Auburn Branch or Western Extension of the New York & Oswego Midland, which now extends from Norwich to Cortland, and from Freeville to Scipio Center. In case the necessary authority is obtained, the iron will probably be taken up from the line between De Ruyter and Norwich, and used in laying the Utica, Ithaca & Elmira track on the gap between Ithaca and Elmira, and also from De Ruyter to Cazenovia.

Kankakee & Mendota.

A company has been organized to build a railroad from Kankakee, Ill., west by north to the Chicago, Burlington & Quincy, at Mendota, a distance of about seventy-five miles. Among the incorporators are said to be a number of parties connected with the Cincinnati, Lafayette & Chicago, and the Chicago, Burlington & Quincy companies.

Anderson, Lebanon & St. Louis.

The directors of this company have voted to accept a proposition made by W. W. Laman, of New York, who, it is stated, offers to go to work on the road at once.

South Mountain & Boston.

Work is progressing on the rock cuts between Blairstown, N. J., and Middletown, and near Swartswood. Nine miles of grading between Augusta and the Delaware are ready for the ties, and work is progressing steadily.

Erie Canal Tolls.

The New York State Canal Board has approved the report of its committee on tolls, which recommends a reduction of 33 1/3 per cent. in tolls on grain, 30 per cent. on lumber, and 50 per cent. on merchandise going from tide-water. The proposed reduction will now be submitted to the Legislature for final action.

The International and the Texas Aid Bonds.

The provisions of the final compromise bill which passed the Texas Legislature and has become a law are, briefly summarized, as follows:

The company shall receive 20 sections, 12,800 acres, per mile of road, which lands shall be exempt from all taxation for 25 years, whether in the hands of the company or of purchasers. The road and its appurtenances are also to be exempt from all taxes for 25 years. Certificates for the land, for the road already built may be issued as soon as the company accepts the act; on road built hereafter, the certificates shall be issued for each section of 10 miles as completed.

If the company fails to build 40 miles each year, or 80 miles each two years, from July 1, 1875, or fails to complete the line from Jefferson to the Rio Grande, the lands for that portion of the road which is not finished shall be forfeited.

The company must alienate one-half of the lands in 15 years and the whole in 20 years, except what is needed for the use of the road.

The company is required to pass through and build depots in San Marcos and New Braunfels, provided depot grounds are donated.

The act, to be binding, must be accepted by a majority of all the stockholders of the company at a meeting to be called for that purpose within 45 days after the act was approved; and must be regarded as a full and complete settlement of all the claims of the company against the State. It is to be regarded as an irrevocable contract between the State and the company.

Louisville & Nashville.

Some time since Col. Sam. Tate made a claim on the company for commissions and interest on \$2,000,000 of bonds sold by him for the company. It was agreed to refer the matter to three arbitrators, and after a long delay they met and after hearing evidence announced that they had come to a decision. The company then gave notice that it would not be bound by the award, which was, however, announced, and which was in favor of Tate for the amount of \$52,400.

The Railroad Problem.

[A lecture delivered at the Lowell Institute in Boston, Mass., on February 26, 1874, by Charles Francis Adams, Jr.]

What people are pleased to term the railroad problem has occupied a very large share of the public attention during the last four years. I have myself been a considerable contributor to the literature which has grown up connected with it, and I regret to say that I do not think my own contributions can be exempted from the general censure which I am disposed to pass upon that literature. Indeed, as a whole, and with a few brilliant exceptions, it is very poor stuff; little better than a vast mass of bad logic, bad law, bad temper and bad philosophy. It illustrates many familiar things in very great perfection—such, for instance, as the wonderful capacity for lying which is latent in figures; or, again, the extreme difficulty experienced by the ordinary mortal in seeing two sides to one question; and though last, by no means least, it has forcibly illustrated the skill with which the meanest and smallest demagogues can take possession of a great discussion, turning upon really broad principles, and so shape it as to effect some little temporary ends of their own.

WHAT THE RAILROAD PROBLEM IS.

What is, then, this railroad problem about which so much has been said? As I understand it, it is simply this: Within the present century the increase of knowledge, the discoveries of science and the intricate developments of civilization have thrown the practical control over certain essential functions

of modern life into the hands of combinations of private persons. Prominent among these functions is that of transportation by rail, and the problem is simply how to bring the private combinations controlling it into a due subordination either to natural laws; or, this failing, how to bring them into practical subordination to political laws. For very obvious economical reasons the operations of the railroad system are not fully amenable to the natural regulating forces known as the laws of political economy—more especially those of competition and of supply and demand. It is only within a very few years that this fact has been generally realized; and even now, when occasion seems to call for it, we hear people—good, practical men in their own occupations—rattle off commonplace about the necessity and the benefit of more railroads as competing agencies. Within the last few years the legislatures of half of the states of this Union have made their statute books ludicrous by elaborate enactments intended to prevent the combination of competing roads.

FAILURE OF COMPETITION.

Now if there is one thing respecting railroads and their development into a system which is more clearly settled than any other it is just this, that no reliable agency through which to regulate their operations can be found in the direction of competition. It should not have required forty years of experience to convince the English-speaking race of this fact; a few moments of reflection ought to have disclosed it, for it is quite apparent that to ensure effective competition at an easy and equable flow of capital and labor into and out from any given occupation is absolutely necessary; as, also, that the same influences which are felt in one locality must, within reasonable limits, be felt in all others. As respects railroads these essentials are simply unobtainable. Capital once placed in railroad development cannot be withdrawn from it and otherwise applied; and the competing agencies being, from the nature of the case, necessarily few in number, and none of them able to withdraw from the contest, one of two things must ultimately result: the stronger of the forces will absorb the weaker, or they will combine as against the community. As regards railroads as a whole, this result is as sure and inevitable as anything in the future can be. Competition is the medium through which consolidation and combination work themselves out. It is, in fact, a simple phase in a process of evolution. Of this, however, nothing but the spectacle of an accomplished fact can ever persuade people. They ignore, they seem even wittingly to blind themselves to the experience of the last twenty years. Take the very matter I have already referred to—the laws forbidding the combination of competing roads. With the experience of these twenty years before their eyes, it is as absurd for people to incorporate provisions like these into their constitutions and statute books, trying thereby to preserve a formal competition between railroads, as it would be for them to attempt to prescribe by law that a difference of ten per cent. as a competing element should be maintained between the prices in the shops on the two sides of Washington street or Broadway.

The difference between competition which is free and open to the whole world, and the competition between two or more holders of monopolies is, therefore, fundamental. While the result of the first description of competition is to reduce and equalize prices, the result of the conflict between monopolies is, on the other hand, to produce local inequalities and arbitrarily to raise and depress prices. It produces local inequalities for the obvious reason that competition is limited to competing points, while not one locality in ten is or can be a competing railroad point; it arbitrarily raises and depresses prices for the reason that neither as respects locality nor time is the pressure of competition between monopolies even or equable. In other words, in the one case competition is an end; in the other, it is a mere weapon to an end. Any one who chooses may observe the deadly effect with which this weapon has been used by railroads in their conflicts with each other during the last twenty years. Those controlling the great competing lines are using it to-day in the fierce railroad war which is raging between the interests represented by the Saratoga Convention and the Baltimore & Ohio Railroad. This war, like all which have preceded it, can result in only one thing, a closer and more effective combination of the parties to the contest; and the longer and fiercer the struggle, the closer and more effective will the ultimate combination be.

How long it will take to produce a perfect combination which will bring the railroad system into the condition of a thoroughly regulated and responsible monopoly, it is not for me to pretend to say. At the same time, no observing man can possibly study the history of the last few years without concluding that some such result is simply a question of time.

As I look, therefore, upon the railroad problem, so called, it becomes a mere matter of forecasting the future from a study of the past. The railroad system has been from the beginning, and now is, passing through a regular process of evolution to a given result. What this result is likely to be is a subject for discussion of which involves almost all the leading issues, economical, political and social, of the day; such questions, for instance, as those involved in the communistic theories in France, or those involved in the co-operative measures under discussion in England and in Germany; or those, finally, which enter into the fundamental political discussions which have been carried on from the commencement in this country, concerning the greater or less degree of interference of government with the affairs of the people.

HISTORY OF RAILROAD DEVELOPMENT.

In order to understand the matter fully it is necessary to recur a little to the history of railroad development. In doing this I shall try to be very brief.

Mankind has as yet devised but four methods of regulating the relations of the railroad system of any country with its government. The railroads may be left wholly in the hands of private individuals, or of corporations, independent of government control, standing upon much the same footing as cotton mills or iron foundries; or they may be subjected to the operation of certain regulating laws through which their obligations to the community will be established, and their charges and profits more or less limited; or, while remaining the property and under the control of private parties they may be subjected to executive supervision and regulation; or, finally, they may in whole or in part be owned and operated by the State. We do not have far to go for examples of each of these several forms of polity.

In England and America, following the fundamental principles upon which their political systems are founded, the attempt throughout has been to leave railroads subject to the operation of natural laws, supplementing them always by legislative enactments. In Belgium, on the contrary, in the very commencement, under the guidance of King Leopold, assisted in his counsels by George Stephenson, the principle was fully recognized that to provide means of transportation was a distinctive function of the government, and the railroad system was scientifically laid out upon that principle. In France, again, a combination of the two principles was attempted and, indeed, carried into practical effect. There the country was divided up among some six large monopolies. Competition was discouraged, and even forbidden; and the private companies, controlling these six monopolies, subject always to a close and over-present governmental supervision, were entrusted with the control of the railroad system. The closer student of history in these several countries will notice that there has been a constant tendency in England and America to approximate to the systems in use in Belgium and France. In other words, the pressure on the government has been incessant to supply the defects

which revealed themselves in the operation of natural laws by legislative enactments. The great principles of political economy, however, never break down where the conditions admit of their full operation; where they do not so admit, no degree of legislative wisdom can so extend those principles as to make them apply to a state of facts with which they naturally have no connection. This somewhat important truth is one which the legislative mind has great difficulty in getting hold of. The consequent statute tinkering of immutable economical laws so as to make them apply to transportation by rail has, however, as we shall see, been both curious and ludicrous; in America, also, it is now going on as busily as ever. The tendency is always, with greater or less friction and with more or less speed, but yet when looked at through a series of years apparent enough, towards one final result; a condition of affairs in which all reliance on competition as a regulating force is abandoned, and railroads are recognized and allowed to take their natural course of development, as monopolies; which must, however, be subjected to some form of government supervision, or regulation, whenever a necessity for it shall develop itself. It is, indeed, but one more illustration of the breaking down of the doctrines of *laissez-faire* and non-interference by government when they are pushed to a too extreme limit.

GROWTH OF GOVERNMENTAL INTERFERENCE.

A similar tendency is noticed as respects several other of those functions in which the complexity of modern civilization has necessarily resulted. After the days of Adam Smith the reaction from the old feudal principle under which the government did, or regulated the doing of, everything, was extreme; going in this country to the length of asserting that the only proper duty of government was to preserve the peace, and that everything it attempted more than that was an infringement on the liberty of the citizen. Everything was thus abandoned to the operation of natural laws. It was argued that competition and supply and demand, if left to themselves, without any governmental interference, would afford all necessary protection. As a matter of experience, however, it was found, and has always been found, that there were certain things which were not subject to the laws of supply and demand. The railroad system was by no means the single exception of this sort which forced itself upon the notice of mankind. Naturally the exceptions first show themselves in the smaller locality, and then spread upward in their influence through the whole political system. They are first seen, for instance, in the supplying of local communities with certain things which are essential to modern life; such, for instance, as water, as gas, as the means of education. Ascending, we find the post office. There is then the telegraph. There are then railroads. In regard to each one of these it is now practically recognized that the principle of *laissez-faire*, or reliance upon the laws of supply and demand, and the influence of competition, do not furnish to the community that degree of protection against the power of individuals controlling those interests which the public security absolutely demands.

GOVERNMENTAL REGULATION OF RAILROADS.

It is, again, very obvious that the whole growth of these exceptional interests has taken place within the present century. The post office, it is true, is an exception to this remark, but in regard to all the others it is unquestionably correct. Previous to the year 1800 there was not one of them which was recognized as a distinctive, governmental function. For myself, I am free to say that I am a believer in the Jeffersonian principle, that the world is governed too much. I dislike extremely to see anything which approximates even to extending government regulation over any new province. Nevertheless, the question is not what we like: it is simply, what is. We must bow to the inevitable. The inevitable, also, is apt in political matters to assert itself very quietly, very imperceptibly, and through agencies which are not recognized. The thing is accomplished, while we are wrangling over the means for its prevention. Now if this matter of transportation is, and by experience is found to be, one over which it is necessary or inevitable that the government should exercise a certain degree of control, we must recognize that fact, and accept it as best we may. If, going a step further, it is found that in accepting it the government is obliged to extend its control over railroads, to an extent which jeopardizes the existence of the political system under which we were brought up, and to which we are attached, and in which we believe, it is none the less a portion of the inevitable; for it is very clear that the railroad system, which has changed and revolutionized the whole world will not turn aside its course simply because it is going to affect the political institutions in use in these United States.

Moreover, I am ready to go further, and to say that upon general principles it must be very apparent to any thinking man that a disturbing force which has already, as I have endeavored to point out in the lectures of this course, revolutionized almost every institution of mankind upon earth, which has moulded nations together on wholly new lines of division, which has affected every portion of our civilized life, whether led in the largest cities in the world or in the smallest New England town—it is perfectly absurd to suppose that a force like this, which affects and changes the whole tone of national thought and of national feeling and of national education, is going to leave political systems untouched. We here see clearly enough how it is revolutionizing Russia, and if we choose to look we can see it no less busily at work much nearer home. If it is true that the strength of a chain is proportionate to the strength of the weakest link in the chain, then we would naturally look for the visible political effect of this railroad influence, as first showing itself at those points where our institutions are subjected to the severest stress. We here live under a republican form of government. Every one knows, and no one here requires to be told, that the Principles of republican government are subject to the severest stress where men are drawn together in the greatest aggregate numbers. The breaking down, when it takes place, will begin to evince itself in the largest cities. I think we have already some indications that it is beginning to evince itself in the city of New York and in others of those great aggregations of men which constitute essentially the railroad centers of the country. I think we also have indications that we are overloading, so to speak, the framework of our government by continually forcing new functions upon it. We see it year by year in Washington; we see it year by year in all our State capitals. Now, if it is found essential to force upon the already overloaded system of our simple republican government a closer and more intricate relation with this complex railroad system, I, for one, frankly confess I do not see where the political revolution that we are entering upon will end. Yet, I am persuaded that no man can stand in the way of a locomotive; and that it is simply for us to study these questions as best we may, and having so studied them, then to proceed to adapt our political institutions to the material system which is stronger than they.

There is but this one course, so far as I can see, open for us to pursue. We must recognize facts as they exist and principles as they develop themselves, and accommodate ourselves to them. This is the conclusion to which the best political minds of Great Britain have evidently come as respects the railroad system of that country, and we may as well make up our minds to follow their example. Indeed, here in Massachusetts we had preceded them, though unconsciously to ourselves, and even now the story of their experience is but a review of our own.

It would not be very easy to decide whether the system of

attempting to supplement the operation of natural laws in the regulation of railroads by the enactment of statutes had been more exhaustively tried in America or in Great Britain; but it is very certain that the results of the system have been more impartially weighed there than here. The conclusions there arrived at apply as well to us as to them, and if we choose we can profit by them; at any rate I will state them to you.

ENGLAND'S EXPERIENCE.

About three years ago a joint committee of the British Houses of Parliament, composed of many of the most eminent public men in England, had this whole system of English railroad legislation, stretching through a period of forty years, under elaborate consideration. Their report marks, I think, an epoch in railroad investigation, though about the only conclusion they arrived at, epigrammatically expressed, was that during those forty years English railroad legislation had never accomplished anything which it sought to bring about, and had never prevented anything which it sought to hinder. At first, as the committee showed, Parliament relied upon certain tariffs of rates, which were incorporated into the charters of the railroad corporations, and which were intended to regulate their charges. In practical operation this method of regulating transportation by rail proved wholly ineffective. It was an attempt to develop the old system of establishing tolls over turnpikes and bridges into a railroad tariff. Necessarily it broke down, from the simple fact that the railroad company was not only the owner of the turnpike, but it was also the single common carrier over it. We can get at a perfect idea how utterly futile such an attempt must necessarily have been, if we consider what the result would have been had Parliament, when it regulated the rates or tolls over those turnpikes and bridges, also undertaken to establish the charges which should be imposed on every person or article in every conveyance that passed over them.

This attempt utterly broke down, and broke down in the very earliest days of the railroad system; so early that in 1840 the theory began to prevail, and found expression in Parliament through Sir Robert Peel, that all these restrictions were wholly unnecessary; and then was advanced a new theory—the theory based upon the supposed existence of an enlightened view of self-interest in the railroad corporation, which it was maintained would always compel managers of railroads to have due regard to the general advantage of the public, with which their own advantage was inseparably intertwined. But the committee of Parliament to which I have referred report in the most pointed manner that experience had demonstrated that this principle could be depended upon only to a very limited extent.

Railroad development went on, and parliamentary action then passed into the new phase of complete reliance upon competition between railroad companies; and it was maintained that the doctrine of free trade and *laissez-faire*, if logically and consistently applied, would be found to contain in it all the regulation of railroads that was necessary. Acting upon this theory, for many years charters were freely granted by Parliament and the indefinite construction of competing roads was encouraged. This took place about the year 1844; and thirty years later the committee report that as a result competition between railways exists only to a limited extent, and that it cannot be maintained by legislation. This was forced upon their attention by the obvious fact that England, like France, had at last come to be divided up into six territories, possessed by about that number of leading railroad combinations. The law of political economy had quietly asserted its supremacy there, as it will here, over any or all legislative enactments, and competition had resulted in combination.

Provision was then made by a very elaborate law, similar to one that has from the beginning been in force in Massachusetts, looking to the ultimate assumption of all the railroads by the government; but the committee report, as a committee of our own legislature would be compelled to do of the similar provision in our own statute law, that the terms of the act of 1844 do not appear to be suited to the present condition of the railroad system; and in case Parliament were to determine to assume the property of the several companies, that it is very improbable that the process of assumption pointed out by that law would be the one which would be followed. Meanwhile, as I have said, the over-construction of competing roads, which had been stimulated by the policy of the year 1844, had led to the inevitable result which competition among railroads must always lead to—the consolidation of competing roads into single companies of enormous proportions was most rapidly going on. This excited the greatest alarm, which found expression in the terse formula used by Captain Tyler in one of his reports, that the time was rapidly coming when the question must be decided whether the government would possess the railroads or whether the railroads would possess the government. But here again this committee report that the process had not brought with it the evils that were anticipated. In any event, they go on to say, whether it has brought them or not, it has been found impossible to prevent consolidation from going on through any legislative enactments, and equally impossible to lay down any principles determining its limits or character.

Finally, this committee, as the result of the most laborious investigation of railroad topics which has ever been undertaken, pass in review all the various panaceas for railroad abuses which we in this country annually see introduced into our legislatures and enacted into multitudinous laws. They find equal mileage rates impracticable and inexpedient; a revision of rates and fares based on the intention of providing a fair rate of profit on the cost of the railroads, they find to be utterly impracticable; a maximum scale of rates and charges could with difficulty be arrived at, and they assert would result in little if any gain to the public. Immediate reduction of rates and fares by law, even if it were practicable, they say, under the rapid fluctuations of the railroad system, could be looked upon as affording no permanent relief; and a periodical revision of rates and fares by government agents they find to be wholly impracticable, unless some standard of revision which no man as yet can suggest can be fixed upon.

We here in Massachusetts have always had reserved in our charters the right for the Legislature to reduce rates of freight and fare when the profits upon any given railroad shall exceed a sum sufficient to pay ten per cent. upon the capital invested in it. I believe that this reserve power in Massachusetts has never been acted upon; and whether it has or not, this committee conclude that it would be in England undesirable to act upon it in the interest of the public. In France there is a provision for the revision of rates of freight and fare founded upon a division of profits between the government and the corporation whenever these profits shall exceed a certain percentage upon the cost of construction. This division has been suggested in this country. The parliamentary committee took it into consideration, and they report that in Great Britain it would be attended, as it would obviously be attended in America, with great if not insuperable difficulties.

THE ENGLISH COMPROMISE POLICY.

Thus you see this committee, which numbered among its members statesmen as sagacious as the Earl of Derby and the Marquis of Salisbury, had gone over the whole ground, and they saw perfectly well where their investigation was bringing them out. The railroad question was an irrepressible one; it was one for which no remedy yet devised had proved adequate, and there remained but one remedy untried, and that a remedy which no one had yet had the courage to apply. Thus the logic of the committee brought it face to face with the final issue, and they were far too honest and too clear-

headed to attempt to avoid it by any trick. What did they do? They did, I think, the wisest thing which as practical statesmen it was in their power to do—they simply declined to meet the issue. Without saying so publicly, without indulging in any of that spirit of prophecy which is permitted to irresponsible investigators not called upon to deal with concrete issues, very quietly these English politicians concluded that the remedy was a very extreme one for an evil which was by no means intolerable. And so they contented themselves with simply recommending the organization of a railroad commission, almost precisely like that which had already for several years previous existed in Massachusetts. In fact they adopted what in medicine would be called an expectant course of treatment. Seeing clearly enough that great principles were at work which must affect, to a degree which cannot now be measured, not only the relations of the government to the railroad system, but the influence of the railroads on the political system of the country—seeing this and pending a future and more complete development of these influences, which are now at best not perfectly understood, and which cannot well, therefore, be measured, they adopted a policy which may best be described as a throwing over entirely of the old idea of supplementing the effect of natural laws by legislative enactments, and adopted a policy which in effect is nothing more than recognizing the monopoly and under asking to regulate it through the force of an intelligent public opinion. As theorists or philosophers, their position would have been absurd; they were not, however, either theorists or philosophers, but practical public men dealing with practical public questions—a horse, we might say, of an altogether different color.

THE MASSACHUSETTS SYSTEM OF LEGISLATION.

From my own practical experience I am strongly inclined to think that in adopting this policy the English committee took the wisest course which could now be suggested. It is the policy which we here in Massachusetts had four years previously adopted, and the working of which I now propose to describe. I propose to describe it, because the system under which our railroads are now regulated is little understood even by ourselves, and yet I do not hesitate to say that I believe it is practically the most effective system which has yet been devised. That system is simply this: Our Legislature recognizes perfectly that they are not subject to the natural laws of supply and demand. We recognize perfectly that competition has broken down as a regulating force. We are not prepared at all to say that the time has yet come, or that the time will ever come, when the Government must assume the functions which now are conferred upon the railroad corporations. We are very unwilling to assume them. We shall not assume them if we can possibly help it. Meanwhile, practically, our railroad system works well. After the best examination that we can make, we find that no railroad system of continental Europe leads to more generally satisfactory results than the railroad system of England, and we see no reason to suppose that the railroad system of England is more satisfactory to the people of that country than our system is to us. Therefore we are disposed to leave well enough alone, so long as it is well enough. When change is necessary we will make it, but we shall not make it before it is necessary. Meanwhile we recognize perfectly the fact that our railroad system depends for its regulation mainly upon that power of public opinion which is always the strongest safeguard of any people. All that we propose at present to do, therefore, is to organize, so far as we may, an effective machinery through which public opinion can easily make itself felt. The whole force of the Legislature remains in abeyance. It may be called into use as a weapon at any time; meanwhile, until it is necessary to call it into use, it slumbers in quiet.

THE MASSACHUSETTS COMMISSION.

Acting upon this theory a board of Railroad Commissioners was created here in Massachusetts some six years ago, whose powers I, myself, when it was first organized, thought would prove wholly insufficient for the end for which they were intended. The Commissioners possessed no absolute power over the railroads. All that they could do was to receive complaints, to listen and to recommend. They were simply a medium; a species of lens by means of which the otherwise scattered and powerless rays of public opinion could be concentrated to a focus, and brought to bear upon any corporation. The results of this system proved very conclusively to my mind how frequently in political schemes results are brought about which are the absolute opposite of what would naturally be expected. This power of concentrating public opinion and bringing it to bear on a given point has in operation always been found to be everything that was necessary. The effect of the consolidation of railroads has been to establish responsibility. Under the old system of innumerable small roads, kept apart from each other by the jealousy of legislation, no responsibility existed. The blame for any difficulty was shovelled off from one to another until the complainant found himself practically without redress. The more railroads are consolidated the easier it is to concentrate responsibility. They themselves realize it. I do not think the public at all appreciate how sensitive our large railroad corporations are to public opinion when once they feel it is fairly aroused. They will persist in a given line of conduct up to a certain point, but the moment that point is passed—the instant they feel that the attention of the public is called to any abuse, as I have had occasion repeatedly to point out in the course of these lectures, from that moment it merely requires that the grievance should be carefully formulated and the remedy distinctly stated, to have it disappear. The corporation may protest; they may assert that no good cause of complaint exists; they may even carefully abstain from any public avowal of error; nevertheless, it will be found that, as a matter of practice, the cause of complaint is removed. It has been so universally in my own experience, and I think it would be found so in the experience of others. All that is requisite is a greater confidence in the force of public opinion and less eagerness to have recourse to force.

Both methods I have been tried, and tried recently, in the experience of this country. The recourse to force has been very generally throughout what are known as the granger States of the Union; and any suggestion to them that they should depend upon that more American faith in the power of public opinion has been received with a species of angry indignation and stigmatized as a recourse to "whining" and supplication. Indeed, it seems to me that our war of the Rebellion, with its great appeal to force, did much in this respect to demoralize our whole country. People have seemed to lose faith in the ultimate supremacy of reason, and in the power of an intelligent public opinion to enforce its dictates. We see this in a succession of "force" bills, whether passed in Congress or by the States; for the "Potter law" was nothing but a "force" bill as applied to railroads in Wisconsin; as our prohibitory legislation has been a "force" bill applied to intemperance in Massachusetts; or as the bill now under discussion in Washington is a "force" bill as applied to the unsettled social condition of portions of the South. So in the granger States of the West, as we saw the other evening, discussion was declared to be a mere waste of time, and recourse was at once had to the constable. I think the result shows very clearly that our Massachusetts reliance upon what must after all continue to be the end fundamental mainspring of every republican government was justified. I think to-day, if all the fare and freight tariffs—if all the "Potter laws" of the West could be swept from their statute books—if their commissioners could be compelled to study thoroughly the subjects with which they were called upon to deal, and to confine themselves

to being mere formal boards of arbitration before whom all causes of complaint on the part of the community against its railroad corporations might be brought in a cheap and easy manner, leading to careful investigation and to well-considered reports and distinct recommendations, always with the legislative power in the background, ready to be brought into play if the railroads show an improper spirit of persistence when once they are clearly shown to be in the wrong—I verily believe if this system could be adopted in place of all these attempts at reforming the world through arbitrary enactments, backed by executive violence, it would be found that a great step had been made in the direction of an immediate solution, for our time, at any rate, of this railroad problem.

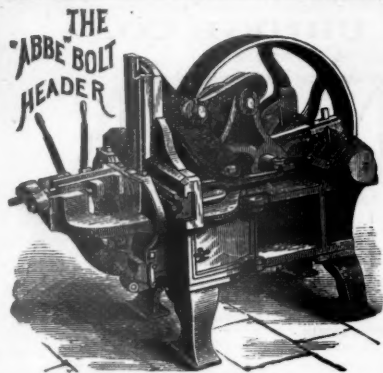
WHAT THE FUTURE WILL REQUIRE.

That it is anything more than a makeshift, a temporary expedient, I should not pretend. The growth of the system, judging by the experience of the last twenty years, will undoubtedly in the course of the next twenty years bring our government face to face with an entire readjustment of administrative machinery. If twenty do not do it, forty will; for the whole system is not yet half a century old, and there is an eternity before it. Mr. Vanderbilt, Mr. Scott, Mr. Garrett are the men who are precipitating this issue upon us. It is not those who on theory are considered or consider themselves as the special exponents of the principle or idea of state ownership through whom the state ownership or regulation of railroads, will be brought about. We are at the best but theorists—doctrinaires; men who study the philosophic evolution of these principles with a greater or less degree of sagacity. The practical men are they who are bringing on the crisis, the men who know nothing and care less for theory, and who, if they have ever heard of evolution at all, regard it probably as a species of mystical absurdity—it is these men who year by year, before our eyes, are welding these great interests into compact masses which in some way or in some form must ultimately be recognized as governmental departments. I don't however, for myself, see any advantage in precipitating a solution of these questions. Undoubtedly they will come in their own good time, though probably in a shape which we cannot now foresee. There is indeed perceptible a continual tendency in Europe, and in a less degree in this country, towards the development of a theory which has its basis in what is called communism, through which the government is to become a co-operative machine, as it were, for the better carrying on of certain functions of civilized life. The idea has not yet received its full development, but time is long and the world still young. At present we can observe its working in the constant tendency to make our local governments assume functions which not long since were considered in as full a degree peculiar to private corporations as transportation is now. We see it here in the city of Boston; in the first place, a few years ago, in the introduction of water; now, yearly, the question is agitated as to the city assuming the duty of supplying the citizens with gas. That question is kept in abeyance by the same consideration which is likely to keep our railroad question in abeyance for a number of years to come; for the supply of gas in Boston being a recognized and distinct monopoly, is fairly brought into subjection to public opinion, and while that is sufficiently strong to hold it in subjection it is found that the system works well. It may be defective in theory, it may be amenable to no law; still in practice it is found that it is not subject to great abuse, and, consequently, the people, very wisely, as I think, do and will tolerate it as long as that condition of affairs exists. They will not break into an established system in order to test a theory; they prefer to bear the ills they have.

So it will be in regard to railroads. Undoubtedly this idea of effecting a species of co-operation of the whole community to supply its members with certain necessities of life will have growth during the coming half century as it has had great growth during the half century which is just past. There is nothing wholly wasted in nature, and even the visionary schemes of half-crazed fanatics, with their panaceas for converting the world into a Utopia, are not without their influence on the great result. Perhaps years hence, when these things are better understood, the line will, by common consent, be drawn. Where circumstances admit of a free and equable competition, the principles of *laissez-faire* and of governmental non-interference will be strictly enforced; where, however, the existence of a monopoly is inevitable, the ideas of communism and co-operation may be so developed as materially to affect the duties and functions of government. In some respects, as in the cases of the Post Office, education and the local water and gas supplies, this development has already and literally taken place. The question seems likely to present itself next in connection with the telegraph and the railroad, and when it is ripe for a solution it will doubtless receive it. At present it is not ripe. We have been engaged in this country and in Europe for the last forty years in constructing our railroad system. We may regard the work of construction as now practically completed. We are just entering upon the other and larger question of its administration. When that question shall force itself upon the community in such a form as to demand from it an immediate solution it will be time to address ourselves to it. At present, however, it admits of an effective and efficient, but far less deep-reaching, treatment. I could refer, as an illustration of the truth of this remark, to the recent conflict which has been raging in the West. There, undoubtedly, the railroad system, under the peculiarities of its growth and development which I referred to in a previous lecture, had developed abuses which for the time being pressed heavily upon that community. The community at once aroused itself, and a conflict was precipitated which is not yet over. I regard it, however, as drawing very near to its close. It is drawing near to its close, also, because the community has practically carried its point. For a time yet lawyers may wrangle and judges deliberate, but the real grievances complained of have in reality been reformed. This, too, was brought about through the pressure of public opinion. The corporations were made to realize their responsibility, and the rest did or will speedily follow. It is this sense of responsibility in the presence of public opinion which is the one thing needful for the present regulation of railroads.

RADICAL CHANGES TO BE MADE IN OUR GOVERNMENT.

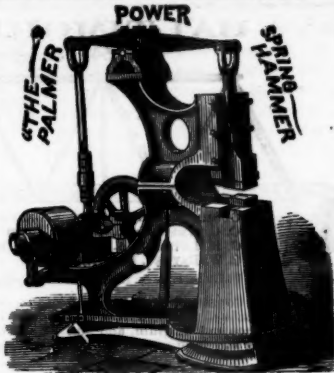
Here in Massachusetts I am not aware of the existence of any grievances, as yet, which cannot easily be dealt with in this way. Should new grievances arise, and should it be found impossible to do so deal with them, we may then be convinced that we are upon the verge of a revolution. I do not mean to say of a revolution in which recourse will be had to violence, but one of those peaceful revolutions in which the government that we have inherited from our fathers will be found to be so overloaded with the functions which the growing complexity of civilization will have forced upon it, that it will become necessary, whether we or our children like it or not, to re-adjust its framework throughout. That ultimately, and at no very remote day, this will be found necessary, seems to me not improbable, for I do not see how a government framed to meet the simple requirements of an eighteenth century community can adapt itself to the elaborate complexity which we cannot but see is inevitable to the civilization of the twentieth century. Sufficient unto the day, however, is the evil thereof, and it is as useless as it is unwise to precipitate issues. The railroad problem will not present itself for an immediate solution. When it does so present itself it may be understood better, and it cannot be understood less than it is now. The experiment of the "Potter law," at any rate, will not be repeated.



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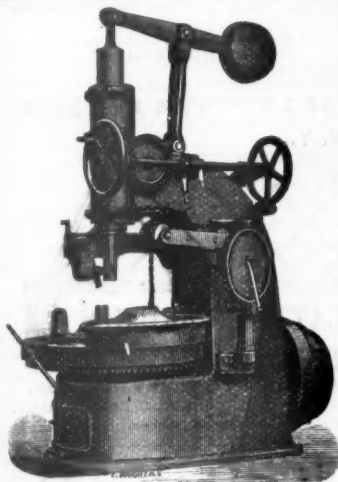
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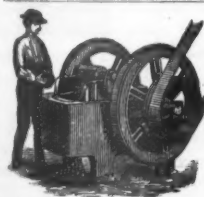
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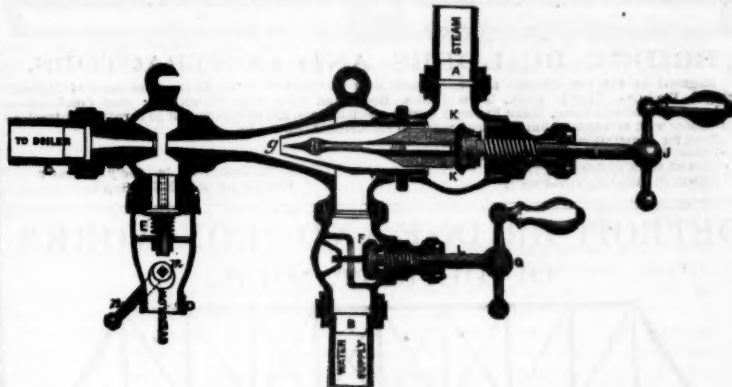
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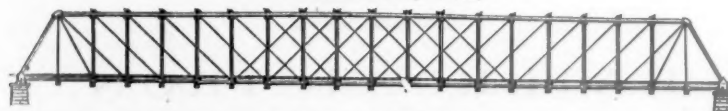
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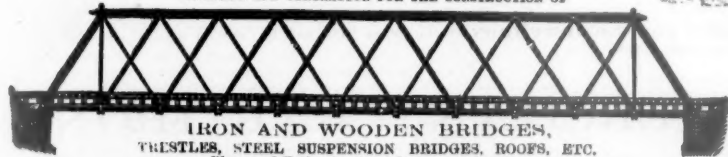


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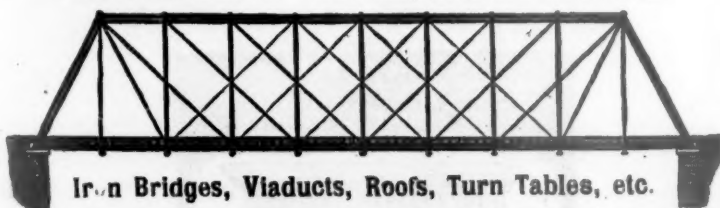
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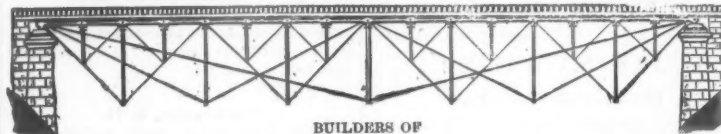
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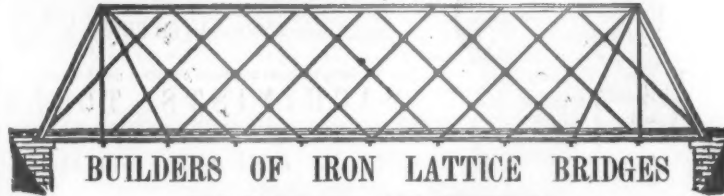
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